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TORPEDOES

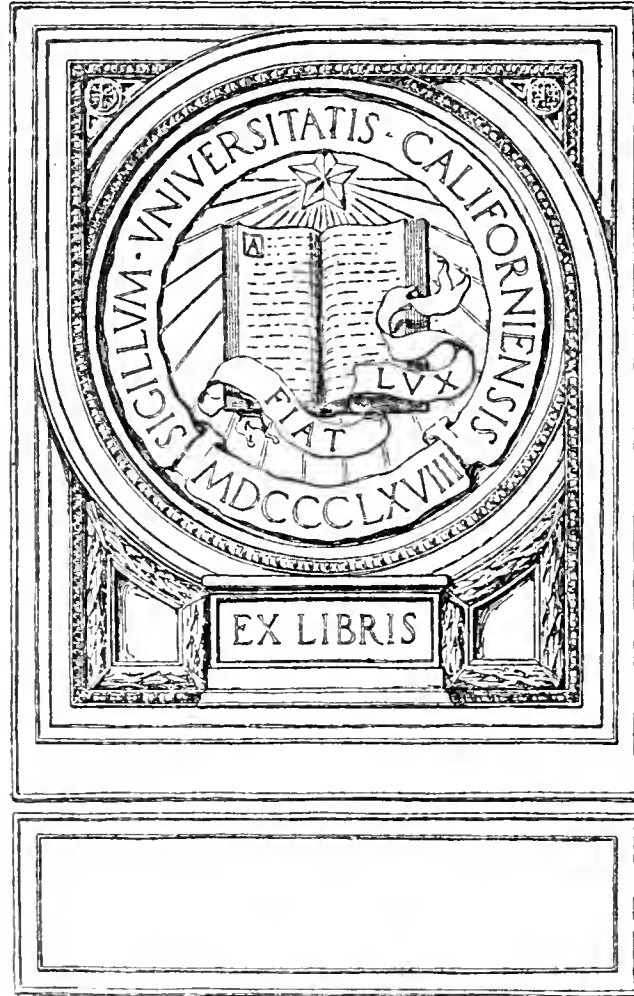
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TORPEDOES

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TORPEDOES

A LIST OF REFERENCES TO MATERIAL IN THE NEW YORK PUBLIC LIBRARY

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GENERAL

1. **Harvey** torpedo. (Engineering, London, v. 9, 1870, p. 180, 241; v. 11, 1871, p. 35-36, 124; v. 13, 1872, p. 352, 412; v. 14, 1872, p. 262; v. 24, 1877, p. 391-392.) **VDA**

Invention of John Harvey.

2. The **Lay** torpedo. (Army and navy journal, New York, v. 13, 1875, p. 182, 293, 595, 610, 674; v. 14, 1876, p. 766, 783, 802; v. 15, 1877, p. 15; v. 16, 1879, p. 657; v. 20, 1883, p. 737, 995; v. 25, 1887, p. 697.)

†† **VWA**

3. **Notes** on torpedoes. (Army and navy journal, New York, v. 7, 1869-70, p. 261, 325, 560, 628-629, 733; v. 8, 1870, p. 94; v. 9, 1871-72, p. 82, 106, 817; v. 10, 1872-73, p. 110, 537, 654, 730, 802, 811; v. 11, 1873-74, p. 126, 206, 222, 230, 254, 297, 313, 342, 358, 392, 446, 456-457, 505, 523; v. 12, 1874-75, p. 200, 284, 473, 506; v. 14, 1876-77, p. 283, 799, 823; v. 15, 1877, p. 254, 285, 327; v. 16, 1878, p. 86, 87, 103; v. 19, 1882, p. 501; v. 20, 1882-83, p. 263, 873; v. 21, 1884, p. 813; v. 23, 1886, p. 500, 619, 682, 873, 1015; v. 24, 1886, p. 75, 440; v. 25, 1888, p. 515; v. 28, 1891, p. 754, 875; v. 29, 1891-92, p. 254, 434, 477, 513; v. 30, 1893, p. 545; v. 31, 1893, p. 43; v. 32, 1894-95, p. 85, 115, 162, 207, 405; v. 33, 1896, p. 657; v. 36, 1899, p. 449; v. 41, 1904, p. 775, 1071; v. 42, 1904-05, p. 128, 256, 392, 477, 771, 1267, 1327; v. 43, 1905, p. 147; v. 45, 1908, p. 996; v. 46, 1908-09, p. 140, 572, 583; v. 48, 1910-11, p. 119, 187, 1512; v. 50, 1913, p. 1309; v. 52, 1914-15, p. 263, 364, 427, 776, 871, 1133, 1229, 1361, 1393, 1624, 1649.)

†† **VWA**

4. **Notes** on torpedoes. (Engineer, London, v. 45, 1878, p. 171, 402; v. 84, 1897, p. 423; v. 95, 1903, p. 40, 471; v. 105, 1908, p. 665; v. 107, 1909, p. 428; v. 109, 1910, p. 40, 66, 196, 348, 472, 573; v. 110, p. 197.) **VA**

5. **Notes** on torpedoes. (Engineering, London, v. 8, 1869, p. 227; v. 10, 1870, p. 286, 473; v. 11, 1871, p. 321, 394, 463; v. 12, 1871, p. 30, 114, 155, 322; v. 14, 1872, p. 34, 366; v. 17, 1874, p. 114, 400, 447; v. 25, 1878, p. 64, 179, 388; v. 28, 1879, p. 36, 177; v. 29, 1880, p. 127, 498; v. 30, 1880, p. 272, 296, 322; v. 31, 1881, p. 434, 486; v. 33, 1882, p. 142, 218, 297; v. 36, 1883, p. 92, 543; v. 43, 1887, p. 234,

369; v. 50, 1890, p. 532; v. 51, 1891, p. 344; v. 55, 1893, p. 165, 223, 625; v. 70, 1900, p. 5; v. 74, 1902, p. 147, 610, 674; v. 76, 1903, p. 353.)

VDA

6. **Notes** on torpedoes. (Institution of Naval Architects, Transactions, London, v. 13, 1872, p. 42, 258; v. 23, 1882, p. 9; v. 29, 1888, p. 184-187, 191; v. 32, 1891, p. 12, 21, 30-31; v. 36, 1895, p. 183; v. 52, 1910, p. 7.)

VXA

7. **Notes** on torpedoes. (Marine engineer, London, v. 10, 1888, p. 203; v. 13, 1891, p. 447; v. 17, 1895, p. 197; v. 18, 1896, p. 205; v. 19, 1897, p. 14, 96, 223; v. 20, 1898, p. 68; v. 24, 1903, p. 433; v. 25, 1903, p. 330; v. 26, 1904, p. 256; v. 31, 1908, p. 39.)

VXA

8. **Notes** on torpedoes. (Scientific American, New York, v. 10, 1863, p. 362; v. 50, 1884, p. 49; v. 52, p. 276; v. 53, p. 19, 50, 149, 342; v. 54, p. 73, 117, 166; v. 55, p. 48, 88, 280, 336-337, 387; v. 56, p. 25, 185, 309, 370, 389; v. 57, p. 114; v. 58, p. 2, 33, 243, 376; v. 59, p. 311, 358; v. 60, p. 183, 228, 324; v. 61, p. 32, 102, 135, 178; v. 62, p. 182, 185; v. 64, p. 9, 374; v. 65, p. 161-162, 273; v. 66, p. 147, 164, 184; v. 67, p. 323; v. 68, p. 23, 262; v. 69, p. 137, 261, 323, 354-355, 387; v. 70, p. 21, 230; v. 71, p. 44, 164, 213, 263, 310, 354, 375-376; v. 72, p. 108, 178, 184, 251, 261; v. 73, p. 185, 364, 377; v. 74, p. 83; v. 76, 1897, p. 99; v. 77, 1897, p. 376; v. 79, 1898, p. 76, 211; v. 80, 1899, p. 92, 244-245; v. 81, 1899, p. 358; v. 82, 1900, p. 35, 151, 247; v. 83, 1900, p. 52, 151, 194, 244; v. 85, 1901, p. 119, 166; v. 86, 1902, p. 60, 84, 94, 204; v. 87, 1902, p. 124, 290, 443; v. 88, 1903, p. 238, 374; v. 89, 1903, p. 190; v. 90, 1904, p. 40, 271; v. 91, 1904, p. 244, 461; v. 94, 1906, p. 286; v. 97, 1907, p. 413; v. 101, 1909, p. 313; v. 109, 1913, p. 278; v. 112, 1915, p. 117; v. 114, 1916, p. 95, 575.)

VA

9. **Notes** on torpedoes. (Scientific American supplement, New York, v. 1, 1876, p. 453; v. 6, 1878, p. 2193, 2208-2209, 2223, 2301, 2462.)

VA

10. **Notes** on torpedoes. (United States Naval Institute, Proceedings, Annapolis, v. 27, 1901, p. 436-437, 839-840; v. 28, 1902, p. 162-163, 439; v. 30, 1904, p. 882-883; v. 31, 1905, p. 727-730, 1014; v. 32, 1906, p. 1606-

General, continued.

1607; v. 33, 1907, p. 418, 875-876; v. 34, 1908, p. 1338; v. 35, 1909, p. 309, 985; v. 36, 1910, p. 625, 903; v. 38, 1912, p. 345; v. 39, 1913, p. 395, 872, 1357; v. 40, 1914, p. 1192, 1508, 1821; v. 42, 1916, p. 268, 967.) **VXA**

11. **Torpedo experiments.** (Engineering, London, v. 18, 1875, p. 126, 165, 269, 439; v. 19, 1876, p. 214, 354, 500; v. 21, 1878, p. 185; v. 22, 1879, p. 367-368; v. 29, 1886, p. 462; v. 32, 1889, p. 93-94, 116; v. 39, 1896, p. 143-145, 636; v. 40, 1897, p. 258, 475; v. 41, 1898, p. 256; v. 42, 1899, p. 478.) **VDA**

12. **Torpedo experiments in England.** (Army and navy journal, New York, v. 12, 1874-75, p. 41, 104, 110, 186, 206, 265, 270-271, 318, 327, 334, 715-716; v. 13, 1875-76, p. 22, 30, 755; v. 14, 1877, p. 383; v. 15, 1877-78, p. 79, 546; v. 17, 1879, p. 266; v. 19, 1881, p. 35; v. 20, 1882, p. 979; v. 24, 1887, p. 925, 939-940; v. 25, 1888, p. 905.) **VWA**

13. **Torpedo experiments and practice** (United States). (Army and navy journal, New York, v. 11, 1873, p. 30, 167, 375; v. 12, 1874, p. 23, 58-59; v. 13, 1875, p. 74; v. 15, 1877, p. 135; v. 16, 1878, p. 7, 253; v. 20, 1882, p. 422; v. 24, 1886, p. 156; v. 49, 1911-12, p. 43, 1599; v. 52, 1914-15, p. 265, 1002, 1532.) **VWA**

14. **Torpedoes or submarine explosive instruments.** (Engineer, London, v. 22, 1866, p. 168; v. 23, 1867, p. 242; v. 31, 1871, p. 49; v. 34, 1872, p. 78.) **VA**

Invention of C. A. McEvoy of London.

15. **The Whitehead torpedo.** (Army and navy journal, New York, v. 13, 1876, p. 650, 679, 746; v. 14, 1876, p. 142; v. 15, 1877, p. 79, 299; v. 17, 1879, p. 143, 586, 607; v. 18, 1881, p. 747, 774, 1077; v. 21, 1883, p. 341.) **VWA**

1630

16. **Hanzelet, Jean Appier, called.** La pyrotechnie de Hanzelet, Lorrain, ou sont representez les plus rares & plus appreneuz secrets des machines & des feux artificiels. Propres pour assieger battre surprendre & defendre toutes places. Pont à Mousson: l. & Gaspard Bernard, 1630. 4 p.l., 264 p. 8°. **VOG**

This work contains interesting data on floating and land mines, bombs, rockets, and artificial fire for lighting battlefields, etc.

1641

17. **Collado, Luys.** Prattica manvale dell' artiglieria. Opera historica, politica, e militare. Milano: Filippo Ghisolfi & Gio. Battista Bidelli, 1641. 8 p.l., 328 p. illus. 4°. **VWW**

1644

18. **Mersenne, Marin.** De nauibus sub aqua natantibus. (In his: F. Marini Mersenni Minimi cogitata physico mathematica, in quibus tam naturæ quam artis effectus admirandi certissimis demonstrationibus explicantur, Pariis, 1644 [part 1], p. 207-208.) **OKC**

The author gives Cornelis Jacobsz Drebbel the credit of inventing the submarine.

1648

19. **Wilkins, John.** Mathematicall magick. Or, The vvonders that may be performed by mechanicall geometry. London: printed by M. F. for S. Gellibrand, 1648. 7 p.l., 295 p. illus. 16°. **PBC**

Concerning the possibility of framing an ark for submarine navigations. The difficulties and conveniences of such a contrivance, p. 178-190.

1650

20. **Siemienowicz, Kazimierz.** Artis magnæ artilleriæ. Pars prima... Amsterodami: apud Joannem Janssonivm, 1650. 8 p.l., 284 p., 2 l., 22 pl. f°. **VOG**

Gives data on bombs, rockets, and floating mines.

1676

21. **Binning, Thomas.** A light to the art of gunnery...either in sea or land-service... London: printed by J. D. for W. Fisher and R. Mount, 1676. 8 p.l., 3-172 p., 4 charts, 3 pl. 4°. **VWW**

Gives receipts for making petards, grenades, fire arrows, rockets, fire trunks, fire barrels, and mines; also receipts for the illumination of trenches and battlefields.

1699

22. **Fernandez de Medrano, Sebastian.** El perfecto artificial, bombardero y artillero, que contiene los artificios de fuegos marciales, nuevo uzo de bombas, granadas, y practica de la artilleria, y mosquete, &c. Brusselas: L. Marchant, 1699. 8 p.l., 196 p., 2 l., 10 pl. 16° in eights. **VOG**

Notes on bombs, rockets, and grenades.

1745

23. **Orval, Perrinet d'.** Essay sur les feux d'artifice pour le spectacle et pour la guerre. Par Mr. P. d'O. [i. e., Perrinet d'Orval,] Paris, 1745. xii p., 2 l., 224 p., 13 pl. 12° in eights. **VOG**

Notes on rockets and mines.

1762

24. **La Machine infernale.** (Recueil de planches, sur les sciences, les arts libéraux, et les arts mécaniques, avec leur explication, Paris, 1762, v. 1, Art militaire, Fortification, planche 11, fig. 6.) †† * **AP**

1764

25. **Bélicor**, Bernard Forest de. Oeuvres diverses de M. Belidor, concernant l'artillerie et le génie. Amsterdam: Arkstée & Merkus, 1764. 1 p.l., xxxix, 396 p., 7 pl. 8°. **VWW**

For descriptions of mines see p. 94-191, 320-391; for descriptions of bombs, p. 238-319.

1776

26. **Bélicor**, Bernard Forest de. M. Belidor's new method of mining. (In: Robert Jones, Artificial fireworks, London, 1776, p. 157-178.) **VOG**

27. **Jones**, Robert. Artificial fireworks, improved to the modern practice, from the minutest to the highest branches... Also, Mr. Muller's Fireworks, for sea and land service... London: J. Millan, 1776. 3 p.l., 193 p., 8 pl. 2. ed. 8°. **VOG**

28. **Vallière**, Jean Florent, marquis de. Dissertation on mines, and their advantages in the defence of places. (In: Robert Jones, Artificial fireworks, London, 1776, p. 178-186.) **VOG**

18— ?

29. **Torka**, Johann. [Seeminen.] (In his: Die Wunder der Technik, Berlin [18—?], p. 446, 451.) **V**

30. — [Torpedos.] (In his: Die Wunder der Technik, Berlin [18—?], p. 450-460.) **V**

1810

31. **Fulton**, Robert. Torpedo war, and submarine explosions. New York: printed by William Elliot, 1810. 57(1) p., 1 l., 5 pl. ob. 8°. **Reserve**

32. — — — New York: printed by W. Elliot, 1810. New York: Reprinted, W. Abbatt, 1914. 55 p., 5 pl. 4°. (Magazine of history with notes and queries. Extra number. no. 35.) **IAG (Magazine)**

The original pamphlet was reviewed in the *Proceedings* of the United States Naval Institute, Annapolis, Md., v. 12, 1886, p. 252-254, *I'X.A.*

33. **Sur les moyens proposés par Robert Fulton, pour la destruction des vaisseaux de guerre et la défense des ports et des rades.** illus. (Société d'encouragement pour l'industrie nationale, Bulletin, Paris, année 9, 1810, p. 170-182.) **VA**

Detailed description of Fulton's torpedo.

- 33a. **Use of the torpedo in the defence of ports and harbors;** communicated to the Senate, February 26, 1810. 11th Congress, 2d session. illus. (In: American state papers, Washington, 1834, v. 14, Naval affairs, v. 1, p. 211-226.) * **SBE**

1811

- 33b. **Experiments on the practical use of the torpedo,** communicated to the House of Representatives, February 14, 1811. 11th Congress, 3d session. illus. (In: American state papers, Washington, 1834, v. 14, Naval affairs, v. 1, p. 234-244.) * **SBE**

1820

34. **Griswold**, Charles. Submarine navigation. (American journal of science and arts, New Haven, v. 2, 1820, p. 94-100.) **OA**

Gives account of David Bushnell's submarine or torpedo and the attack on the British fleet in New York harbor, August, 1776, by Ezra Lee.

1825

35. **Cutbush**, James. Of the American turtle. (In his: System of pyrotechny, Philadelphia, 1825, p. 515-521.) **VOG**

Gives a very interesting account of David Bushnell's submarine or torpedo and the attack on the British fleet in New York harbor in August, 1776.

36. — Of the combustible substances used in, and the manner of preparing a fire-ship. (In his: System of pyrotechny, Philadelphia, 1825, p. 507-512.) **VOG**

37. — Of the torpedo. Of the marine incendiary kegs, etc. (In his: System of pyrotechny, Philadelphia, 1825, p. 521-525.) **VOG**

Notes on Fulton's torpedo. Attempt of a Mr. Mix to destroy the "Plantagenet" in Lynnhaven harbor in July, 1813; also attempt of a Mr. Penny of Easthampton, Long Island, to destroy a British battleship.

38. **Montgéry**, de. Notice sur la vie et les travaux de Robert Fulton. Paris: Bachelier, 1825. 1 p.l., 70 p. 8°. **AN p.v.26, no.19**

Includes notes on torpedoes.

39. — **Traité des fusées de guerre, nommées autrefois rochettes et maintenant fusées à la Congreve.** Paris: Bachelier, 1825. 2 p.l., 364 p., 6 diagrs. 8°. **VWS**

Gives data on submarines and torpedoes.

1825, *continued*.

40. **Worcester** (2. marquis), Edward Somerset. [Torpedoes.] (In his: *The century of inventions of the marquis of Worcester*, London, 1825, p. 12-14.) **V**

Description of a bomb or torpedo for sinking ships; also methods of protecting ships from torpedoes.

1840

41. **Memorial** of a committee of the military convention at Norwich, Vermont, praying the revision and alteration of the system of the military defences of the United States. Feb. 24, 1840. [Washington, 1840.] 26 p. 8°. (U. S. 26. cong., 1. sess. Sen. doc. 238; serial 358.) ***SBE**

This 'memorial prepared by Captain Alden Partridge, president of Norwich University, gives valuable suggestions for the training of the "citizen soldiery" applicable at this time; also data on the use of the fireship and of Greek fire; also an interesting description of the fireship invented by Uriah Brown. The proposed ship, seventy-five feet long, was to be so constructed as to float low in the water. Its sides and decks were to be protected by heavy iron plates set at such angles that no shot fired at it could strike at a greater angle than 15 degrees, thus causing the shots to ricochet without penetrating the deck or sides. The chief use of the boat was the firing of a liquid composition through tubes passing through orifices in the deck which on coming in contact with the air would instantly take fire.

1862

42. **Collier**, Francis J. Magnetic torpedoes. (Scientific American, New York, new series, v. 6, 1862, p. 230.) **VA**

Brief note.

43. **Holman**, H. R. Harbor defence-torpedoes. (Scientific American, New York, new series, v. 6, 1862, p. 38.) **VA**

Brief note.

44. **Submarine** infernal machine. illus. (Scientific American, New York, new series, v. 5, 1862, p. 101.) **VA**

Torpedo work on the Potomac river.

45. **Submarine** torpedoes — infernal machines. illus. (Scientific American, New York, new series, v. 6, 1862, p. 164-165.) **VA**

Notes on the work of Robert Fulton and Lord Cochrane.

1863

46. **Demijohn** torpedoes. (Scientific American, New York, new series, v. 8, 1863, p. 19.) **VA**

Abstracted from the *Pittsburgh dispatch*.

47. **Destruction** of the U. S. S. "Housatonic" by a torpedo. (Scientific American, New York, new series, v. 10, 1863, p. 165.) **VA**

48. **Explosion** of a submarine torpedo. (Scientific American, New York, new series, v. 8, 1863, p. 7.) **VA**

Destruction of the U. S. S. Cairo, Dec. 11, 1862.

49. The "**Monitor**" torpedo. (Scientific American, New York, new series, v. 9, 1863, p. 56.) **VA**

50. A **New** rebel torpedo. illus. (Scientific American, new series, v. 9, 1863, p. 388.) **VA**

Report of William N. Jeffers on test.

51. The **New** torpedo in Charleston harbor. illus. (Scientific American, New York, new series, v. 9, 1863, p. 164, 229.) **VA**

1864

52. **Doty**. On the torpedoes used by the Confederate States in the destruction of some of the Federal ships of war, and the mode of attaching them to the rams. (British Association for the Advancement of Science, Report, Bath, 1864, Notices and abstracts, p. 185-186.) ***EC**

Also abstracted in *Army and navy journal*, New York, v. 2, 1864, p. 138-139, †† *VWA*.

53. **Experiment** with torpedoes. (Engineer, London, v. 18, 1864, p. 146.) **VA**

Experiment in the Scheldt near Antwerp.

54. **New** rebel torpedo. illus. (Scientific American, New York, new series, v. 11, 1864, p. 228.) **VA**

55. **New** torpedo. illus. (Engineer, London, v. 18, 1864, p. 254.) **VA**

Invention made at Richmond, Va. Abstracted from *Scientific American*.

56. The **Rebel** torpedoes. illus. (Scientific American, New York, new series, v. 10, 1864, p. 390.) **VA**

57. **Torpedo** planting by the Confederates. (Army and navy journal, New York, v. 1, 1864, p. 653.) †† **VWA**

58. **Torpedoes**. (Engineer, London, v. 18, 1864, p. 194.) **VA**

Notes on invention used in Confederate navy.

59. **Torpedoes** used by the rebels. illus. (Scientific American, New York, new series, v. 11, 1864, p. 21.) **VA**

1865

60. **American** torpedoes in England. (Scientific American, New York, new series, v. 13, 1865, p. 350.) **VA**

Invention of W. Beardslee.

1865, continued.

61. **Comstock, C. B.** (Use of land torpedoes by the Confederates at Fort Fisher.) illus. (War of the rebellion: a compilation of the official records of the Union and Confederate armies, Washington, 1895, series 1, v. 46, part 2, p. 215-217.) **IKC**

Letter to General R. Delafield.

62. **The Electrical torpedo.** (Scientific American, New York, new series, v. 13, 1865, p. 113.) **VA**

Note on the work of Nathaniel J. Holmes in England.

63. **A New torpedo.** (Engineer, London, v. 19, 1865, p. 253.) **VA**

Brief note on invention by a Swedish engineer.

64. **Rye, William Brenchley.** England as seen by foreigners in the days of Elizabeth and James the First. Comprising translations of the journals of the two dukes of Wirtemberg in 1592 and 1610. London: J. R. Smith, 1865. cxxxii p., 1 l., 3-300 p., 5 pl., 2 ports. 8°. **CN**

Has a reference to Cornelius Drebbel on p. 61, and an extensive biographical account of his activities on p. 232-242.

65. **Torpedo invented by Donald McKay.** (Army and navy journal, New York, v. 3, 1865, p. 89.) †† **VWA**

66. **Torpedo invented by G. Davies, London.** (Engineer, London, v. 19, 1865, p. 159.) **VA**

67. **The Torpedo ship.** (Scientific American, New York, new series, v. 12, 1865, p. 39.) **VA**

Brief note.

68. **Torpedoes.** (Army and navy journal, New York, v. 3, 1865, p. 728-729.) †† **VWA**

A new type of torpedo used in France.

1866

69. **History of a torpedo boat.** (Army and navy journal, New York, v. 3, 1866, p. 562; v. 4, 1866, p. 18.) †† **VWA**

Note on Confederate boat constructed at Mobile.

70. **Holmes, N. J.** Torpedo defences. (Royal United Service Institution, Journal, London, v. 10, 1866, p. 402-414.) **VWA**

With discussion, p. 414-416.

Gives valuable historical notes on torpedo warfare during the Civil war; also the development of the torpedo.

71. **A New torpedo.** illus. (Engineer, London, v. 22, 1866, p. 422.) **VA**

Invention of Mr. M. Nebol of New York.

72. **Torpedo boats for harbor defence.** (Army and navy journal, New York, v. 3, 1866, p. 457.) †† **VWA**

73. **Torpedo experiments in England.** (Scientific American, New York, new series, v. 14, 1866, p. 407-408.) **VA**

74. **Torpedoes.** (Engineering, London, v. 1, 1866, p. 333-334.) **VDA**

Notes on the work of Holmes and Maury.

75. **Torpedoes for war.** (Engineer, London, v. 21, 1866, p. 368.) **VA**

Notes on invention of H. J. Holmes and Lieut. Maury.

76. **Vauvert, Maxime.** Toulon. — Expérience de torpilles. illus. (Le monde illustré, Paris, v. 18, 1866, p. 196-197.) * **DM**

1868

77. **Nouvelles torpilles.** (Cosmos, Paris, série 2, v. 3, 1868, p. 27.) **VA**

78. **Torpedoes.** illus. (Engineer, London, v. 25, 1868, p. 1-2, 19-20, 35.) **VA**

Notes on torpedoes at the International Exhibition, Paris; Austrian torpedoes; experiments by Mallet, N. J. Holmes, Baron d'Ebnér; the toposcope.

79. **Torpedoes in France.** (Engineer, London, v. 25, 1868, p. 260.) **VA**

1869

80. **Gilmore, Arthur H.** Anti-torpedo vessel. (Royal United Service Institution, Journal, London, v. 13, 1869, p. 33.) **VWA**

81. **Hamilton, John Randolph.** The American navy; its organization, ships, armaments and recent experiences. (Royal United Service Institution, Journal, London, v. 12, 1869, p. 243-271.) **VWA**

Valuable data on the use of torpedoes during the Civil war.

82. **Jervois, W. F. Drummond.** Coast defences, and the application of iron to fortification. illus. (Royal United Service Institution, Journal, London, v. 12, 1869, p. 548-569.) **VWA**

Notes on torpedoes and submarine mines.

83. **Patents on torpedoes issued to Frederick N. Gisborne of London.** (Engineer, London, v. 27, 1869, p. 58; v. 28, 1869, p. 44.) **VA**

84. **Torpedoes.** (Van Nostrand's engineering magazine, New York, v. 1, 1869, p. 632-635.) **VDA**

From *Pall Mall gazette*.

85. **Torpedoes in war.** (Army and navy journal, New York, v. 6, 1868, p. 35, 534, 600, 788.) †† **VWA**

1870

86. The **Austrian** torpedo. (Van Nostrand's engineering magazine, New York, v. 2, 1870, p. 325-326.) **VDA**
87. **Captain Harvey's** torpedo. (Van Nostrand's engineering magazine, New York, v. 3, 1870, p. 657-658.) **VDA**
88. **Fishing up** torpedoes. (Engineer, London, v. 30, 1870, p. 343.) **VA**
Plan proposed by C. W. Merrifield.
89. **Harvey** torpedo. (Engineering, London, v. 9, 1870, p. 180, 241.) **VDA**
The first article is reprinted in *Van Nostrand's engineering magazine*, New York, v. 2, 1870, p. 512-514, *VDA*.
90. **Harvey's** Seetorpedo. (Dingler's polytechnisches Journal, Augsburg, Bd. 197, 1870, p. 127-129.) **VA**
91. The **Torpedo**. (Army and navy journal, New York, v. 7, 1870, p. 564.) †† **VWA**
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92. **Torpedo** war. (Engineering, London, v. 9, 1870, p. 25-26.) **VDA**
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93. **Torpedoes**. (Engineer, London, v. 30, 1870, p. 72.) **VA**
Experiments made at Plymouth, Eng., by Admiral Sir H. Codrington.

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94. **Beal, S.** Description of a Chinese torpedo. (Royal United Service Institution, Journal, London, v. 15, 1871, p. 728-730.) **VWA**
Invention of John Lewis, an American.
95. **Braham, Philip.** Working torpedoes. illus. (Engineering, London, v. 12, 1871, p. 89.) **VDA**
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96. **Callender, M. L.** Floating marine torpedoes. illus. (Van Nostrand's engineering magazine, New York, v. 4, 1871, p. 237-240.) **VDA**
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97. **Electrically** exploding torpedoes. (American artisan, New York, v. 12, 1871, p. 344.) **VA**
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98. **Ericsson's** torpedo. (Army and navy journal, New York, v. 9, 1871, p. 339, 371.) †† **VWA**

99. The **Fish** torpedo. (Engineer, London, v. 32, 1871, p. 381.) **VA**
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100. **Fuses** for torpedoes. illus. (Engineer, London, v. 31, 1871, p. 46.) **VA**
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101. **Harvey, Frederick.** Instructions for the management of Harvey's sea torpedo. London: E. & F. N. Spon, 1871. 43 p., 13 pl. 8°. **VWS**
102. **Morshead, W.** Torpedoes. (Engineer, London, v. 31, 1871, p. 150; v. 33, 1872, p. 298.) **VA**
Letters stating that on Oct. 20, 1860 he suggested the employment of electricity for the guiding of "explosive vessels."
103. **Self-propelling** submerged torpedoes. (Engineer, London, v. 31, 1871, p. 258, 328.) **VA**
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104. **Stotherd, Richard Hugh.** Defensive submarine warfare. (Royal United Service Institution, Journal, London, v. 15, 1871, p. 705-733.) **VWA**
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105. A **Torpedo** cruise. (Army and navy journal, New York, v. 9, 1871-72, p. 30, 399, 737.) †† **VWA**
Experiments with the Harvey torpedo. From the *London Broad Arrow*.
106. **Torpedo** experiments. (Army and navy journal, New York, v. 9, 1871, p. 106.) †† **VWA**
Experiments conducted by Gen. Humphreys.
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108. **Torpedoes**. (Van Nostrand's engineering magazine, New York, v. 4, 1871, p. 107-108.) **VDA**
109. **Torpedoes** in oil wells. (Engineer, London, v. 31, 1871, p. 411.) **VA**
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110. **Weir, Robert.** Submarine torpedoes. (Van Nostrand's engineering magazine, New York, v. 4, 1871, p. 128-132.) **VDA**
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113. **Kirkland**, William A. The rival torpedoes. (Army and navy journal, New York, v. 10, 1872, p. 314-315, 363, 406-408, 426.) †† VWA

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142. **Ericsson** pneumatic torpedo. illus. (Scientific American, New York, new series, v. 31, 1874, p. 390.) **VA**

143. **Hawksley, George.** Torpedoes. (Engineer, London, v. 37, 1874, p. 237.) **VA**
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A series of experiments.

148. **A Torpedo detector.** (Engineer, London, v. 37, 1874, p. 148.) **VA**

Notes on the Wilde electro-magnetic induction machine.

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150. **Torpedo explosions at Woolwich.** (Engineer, London, v. 37, 1874, p. 85, 139, 209.) **VA**

151. **Torpedoes a century old.** (Army and navy journal, New York, v. 11, 1874, p. 426.) †† **VWA**

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Invention of John Cross of London, who about 1776 proposed a plan "to keep off all troublesome enemies, who dare presume to disturb their peace" and to end the American Revolution.

152. **The Whitehead torpedo.** (Engineer, London, v. 37, 1874, p. 141.) **VA**

Series of experiments.

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Brief note on the "Alarm."

155. **Barber, Francis M.** Lecture on submarine boats, and their application to torpedo operations. Newport, R. I.: U. S. Torpedo Station, 1875. 39(1) p., 8 diagr. 8°. (United States.—Ordnance Bureau, Navy Department.) **VXV p.v.1, no.4**

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157. **Dawson, W.** Offensive torpedo warfare. (Royal United Service Institution, Journal, London, v. 15, 1875, p. 86-91.) **VWA**

Valuable notes on the use of torpedoes during the Civil war.

158. **High speed torpedo launch built by Yarrow & Hedley.** (Engineer, London, v. 39, 1875, p. 100.) **VA**

159. **Hill, Walter N.** Notes on explosives, and their application in torpedo warfare. Newport, R. I.: U. S. Torpedo Station, 1875. 60 p., 2 diagr. 8°. (United States.—Ordnance Bureau, Navy Department.) **VXV p.v.1, no.1**

160. **Lindsay, Charles.** Plan for protecting ships (at anchor), blockading a port from attacks by outrigger Whitehead, or Harvey torpedoes. (Royal United Service Institution, Journal, London, v. 19, 1875, p. 527-531.) **VWA**

1875, *continued*.

161. Maritime attack by torpedoes. (Engineer, London, v. 39, 1875, p. 370-371.) **VA**

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Notes on the Whitehead torpedo.

162. A Monster torpedo. (Engineer, London, v. 39, 1875, p. 178.) **VA**

Brief note on experiments at Toulon.

163. Navigating torpedoes. (Manufacturer and builder, New York, v. 7, 1875, p. 219.) **VA**

Invention of Denayrouse.

164. The Oberon submarine mine experiments. illus. (Engineer, London, v. 39, 1875, p. 361.) **VA**

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165. Submarine boats. Engineer, London, v. 40, 1875, p. 157.) **VA**

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166. Torpedo ship "Vesuvius." illus. (Engineering, London, v. 19, 1875, p. 375-376.) **VA**

167. Woolley, A. Sedgwick. On spar torpedo warfare. (Institution of Naval Architects, Transactions, London, v. 16, 1875, p. 147-154.) **VXA**

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169. The Admiralty torpedo school. (Engineer, London, v. 42, 1876, p. 446.) **VA**

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170. Barnaby, N. On ships of war. illus. (Institution of Naval Architects, Transactions, London, v. 17, 1876, p. 1-12.) **VXA**

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171. Bradford, Royal Bird. Suggestions on torpedo outfits of the vessels of the navy. Report on the torpedo fittings of the U. S. S. Intrepid. Washington: Gov. Prtg. Off., 1876. 21 p., 4 pl. 8°. (United States.—Ordnance Office, Navy Department.) **VXM p.v.2, no. 3**

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173. Fish torpedoes. (Engineer, London, v. 42, 1876, p. 289.) **VA**

Brief note.

174. Locomotive torpedoes. (Engineer, London, v. 42, 1876, p. 259.) **VA**

175. Notes on torpedoes: charge cases. illus. (Engineering, London, v. 22, 1876, p. 67-68.) **VDA**

176. The Oberon experiments. illus. (Engineer, London, v. 42, 1876, p. 14-15.) **VA**

177. Offensive torpedo warfare. (Engineer, London, v. 42, 1876, p. 11.) **VA**

Notes on the Harvey, Spar and Whitehead torpedoes.

178. Recent trial of the Lay torpedo. illus. (Scientific American supplement, v. 1, 1876, p. 337.) **VA**

179. Signalling and firing apparatus [for torpedoes]. illus. (Engineering, London, v. 22, 1876, p. 303-304, 306.) **VDA**

180. Torpedo accidents [at Woolwich and Portsmouth]. (Engineer, London, v. 41, 1876, p. 472, 484.) **VA**

181. Torpedo steam launches. (Engineering, London, v. 19, 1875, p. 165-166, 366-368; v. 20, 1875, p. 236.) **VDA**

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182. [Torpedoes for defence of harbors.] illus. (Engineering, London, v. 22, 1876, p. 459-460, 534-535.) **VDA**

183. Torpedoes at the International Exhibition, Philadelphia. (Engineering, London, v. 23, 1877, p. 54-55.) **VDA**

184. Torpedoes at the [International] Exhibition, Philadelphia. (Scientific American supplement, New York, v. 1, 1876, p. 388; v. 2, 1876, p. 479.) **VA**

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185. Abel's mechanical primer. (Engineering, London, v. 24, 1877, p. 83-84.) **VDA**

186. Alliman, A. L. Torpedoes and torpedo warfare. (Engineer, London, v. 44, 1877, p. 367.) **VA**

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187. Allison, R. Torpedoes. (Engineer, London, v. 43, 1877, p. 446.) **VA**

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189. Capt. McEvoy's spar torpedoes. (Engineer, London, v. 43, 1877, p. 340.) **VA**

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190. **Donaldson, John.** The Thornycroft torpedo-vessels; their construction, armament, etc., and the results of certain experiments that have been made with them. (Royal United Service Institution, Journal, London, v. 21, 1877, p. 611-632.) **VXA**

Notes on torpedoes and their use during the Civil war.

191. The **Early** history of torpedoes. (Royal Society of Arts, Journal, London, v. 25, 1877, p. 881-882.) **VA**

192. **Electric** batteries for torpedoes. illus. (Engineering, London, v. 24, 1877, p. 161-162.) **VDA**

193. **Electric** fuses, jointers, signalling, etc., for torpedoes. illus. (Engineering, London, v. 24, 1877, p. 219-220.) **VDA**

194. **Electro-contact** torpedoes. illus. (Engineering, London, v. 23, 1877, p. 157-158.) **VDA**

195. **Electro-mechanical** torpedoes. illus. (Engineering, London, v. 23, 1877, p. 214-215, 455-456.) **VDA**

With illustration, p. 216.

196. The **English** torpedo system. (Army and navy journal, New York, v. 14, 1877, p. 646-647.) **†† VWA**

197. **Ferris, John.** Notes on the removal of the hull of the ship "Forest" by extempore torpedoes. illus. (Royal United Service Institution, Journal, London, v. 21, 1877, p. 1133-1134.) **VWA**

198. **Gakuma, G.** Torpedoes. (Scientific American, New York, new series, v. 36, 1877, p. 337.) **VA**

199. **Gun, ram and torpedo.** (Army and navy journal, New York, v. 14, 1877, p. 834.) **†† VWA**

200. **Manufacture** of the Harvey torpedo. illus. (Scientific American, New York, new series, v. 36, p. 402.) **VA**

201. **Mechanical** torpedoes. (Engineering, London, v. 23, 1877, p. 406-408, 456.) **VDA**

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202. **Moisson.** Des explosions au sein de l'eau. (Revue maritime et coloniale, Paris, v. 52, 1877, p. 744-770; v. 53, 1877, p. 86-120.) **VXA**

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204. **Pott, Constantin.** Die Entwicklung des Seeminen- und Torpedowesens, und dessen gegenwärtiger Stand in den ver-

schiedenen Staaten. (Mitteilungen aus dem Gebiete des Seewesens, Pola, Bd. 5, 1877, p. 426-435.) **VXA**

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206. **Russian** torpedoes. (Engineering, London, v. 24, 1877, p. 19.) **VDA**

207. **Scott, Michael.** On improved ships of war and their defence against torpedoes. (Institution of Naval Architects, Transactions, London, v. 18, 1877, p. 37-49.) **VXA**

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208. The **Steam** launch and the torpedo. (Army and navy journal, New York, v. 14, 1877, p. 688-689.) **†† VWA**

209. **Stone, Charles A.** A general description of the ordnance and torpedo outfit of the U. S. S. "Trenton." (United States Naval Institute, Proceedings, Annapolis, v. 3, 1877, p. 89-93.) **VXA**

210. **Torpedo** armament of various wars. (Royal United Service Institution, Journal, London, v. 21, 1877, p. 1137-1144.) **VWA**

211. **Torpedo** boats. (Engineer, London, v. 44, 1877, p. 419-420.) **VA**

Notes on torpedoes, p. 420.

212. **Torpedo** defence. (Army and navy journal, New York, v. 15, 1877, p. 201, 267.) **†† VWA**

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213. **Torpedo** defence. illus. (Engineering, London, v. 24, 1877, p. 279-280.) **VDA**

214. **Torpedo** experiment in Germany. (Engineer, London, v. 44, 1877, p. 88.) **VA**

Brief note.

215. **Torpedo** launch warfare. illus. (Scientific American, New York, new series, v. 36, 1877, p. 239, 246.) **VA**

216. **Torpedo** launches. illus. (Engineering, London, v. 23, 1877, p. 428-429, 448-450.) **VDA**

Also printed in *Van Nostrand's engineering magazine*, New York, v. 17, 1877, p. 125-128, *VDA*.

217. **Torpedo** range at the Royal arsenal canal. (Engineer, London, v. 43, 1877, p. 411.) **VA**

218. **Torpedo** warfare. (Illustrated London news, v. 70, 1877, p. 556-558.) *** DA**

Note on the "Alarm" designed by Admiral David Porter, U. S. N. Whitehead torpedo. Illustration of torpedo vessel used by the Russians on the Danube river; American torpedo-vessel Alarm.

219. **Torpedo** warfare. (Illustrated London news, London, v. 71, 1877, p. 227-229.) *** DA**

Illustrations: Suspension torpedoes in a rapid river; Punshon's floating torpedo; Turkish self-acting torpedo; Towing of Harvey's torpedo against an enemy; Hall Macdonald rocket; and Outrigger torpedo.

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220. **Torpedo warfare.** illus. (Scientific American, New York, new series, v. 37, 1877, p. 39-40.) **VA**

221. **Torpedoes at sea.** (Engineer, London, v. 43, 1877, p. 184.) **VA**

222. **Torpedoes in Turkey.** (Engineer, London, v. 44, 1877, p. 105.) **VA**

223. **Torpedoes in the United States.** (Engineer, London, v. 43, 1877, p. 4.) **VA**

224. **Die Torpedos im russisch-türkischen Kriege.** (Mittheilungen aus dem Gebiete des Seewesens, Pola, Bd. 5, 1877, p. 365-371, 460, 508-510, 579; Bd. 6, 1878, p. 22-27, 116-117, 284-285.) **VXA**

225. **Ueber Torpedoboote und Torpedos.** (Mittheilungen aus dem Gebiete des Seewesens, Pola, Bd. 5, 1877, p. 474-478.) **VXA**

226. **The United States torpedo steamer Alarm.** illus. (Scientific American, New York, new series, v. 36, 1877, p. 159, 162.) **VA**

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227. **Chardonneau, F.** Des torpilles russes sur le Danube, à Soulina et à Batoum. (Revue maritime et coloniale, Paris, tome 57, 1878, p. 156-171; tome 59, 1878, p. 75-101.) **VXA**

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A very complete series of articles.

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Protected by net.

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Illus., p. 264.

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†† **VWA**

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432. **The Sims torpedo.** (Engineering, London, v. 41, 1886, p. 139.) **VDA**

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†† **VWA**

Brief note.

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Notes on torpedoes.

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Invention of James Weir Graydon.

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536. **Torpedo** boats of the British navy. (Engineering, London, v. 48, 1889, p. 709.) **VDA**

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631. **Protection** against torpedo-boats. (United States Naval Institute, Proceedings, Annapolis, v. 19, 1893, p. 489-490.) **VXA**

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650. **Some** remarks on modern naval tactics. (Engineering, London, v. 58, 1894, p. 479-482, 512-513, 539-542, 585-586.) **VDA**

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The first five articles are reprinted from the

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1070. **Torpedo** attack on the monitor "Florida." illus. (Scientific American, New York, v. 98, 1908, p. 456.) VA

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1076. **Le Torpilleur** allemand G. 137. illus. (Journal de la marine, le yacht, Paris, v. 31, 1908, p. 23.) †† VXF

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1088. **British** and foreign torpedo-boat flotillas. (Naval annual, London, 1909, p. 226-243.) **VXA**

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1091. Effect of torpedoes on warships. (Marine review, Cleveland, O., v. 29, April 21, 1909, p. 36.) **† VXA**

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1102. **Le Séven**, E. Appareil moteur à turbines Parsons du torpilleur 293. (Revue maritime, Paris, tome 181, 1909, p. 361-394.) **VXA**

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1909, continued.

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1108. The **New** Schneider torpedo. (Journal of United States artillery, Fort Monroe, v. 32, 1909, p. 213-214.) **VWA**

1109. The **New** torpedo battery at Léoube bay. (The Navy, Washington, v. 3, June, 1909, p. 37.) **† VYE**

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1113. A **Projectile** carrying a torpedo. (Army and navy journal, New York, v. 47, 1909, p. 146.) **†† VWA**

Invention of Lieut.-Commander Cleland Davis.

1114. A **Radi-automatic** torpedo invented by M. Gustave Gabet. (Journal of United States artillery, Fort Monroe, v. 31, 1909, p. 213.) **VWA**

Brief note.

1115. **S.**, E. D. Il siluro Hardcastle. (Rivista marittima, Roma, anno 42, trimestre 2, 1909, p. 350-352.) **VXA**

1116. The **Schneider** torpedo-launching station. illus. (Scientific American, New York, v. 100, 1909, p. 222.) **VA**

With illustration on p. 217.

1117. **Schneider** torpedo testing station. illus. (Engineering, London, v. 88, 1909, p. 170-173.) **VDA**

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1123. **Torpedo** defence. illus. (Marine engineer, London, v. 32, 1909, p. 28-29.) **VXA**

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1126. **Torpedos** y minas. (Revista general de marina, Madrid, tomo 65, 1909, p. 337-348.) **VXA**

1127. **Torpedoschlachtschiffe**. illus. (Mitteilungen aus dem Gebiete des Seewesens, Pola, Bd. 37, 1909, p. 243-247.) **VXA**

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Brief note.

1909, continued.

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1140. **Dary**, Georges. Torpilles dirigeables. (Cosmos, Paris, nouv. série, tome 62, 1910, p. 438-439.) **VA**

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1142. — Télémécanique sans fil: la torpille dirigeable Gabet. illus. (Cosmos, Paris, nouv. série, tome 63, p. 37-40.) **VA**

1143. **Le Franc**, A. Nouvelles torpilles automobiles. (Moniteur de la flotte, Paris, année 57, no. 43, Oct. 23, 1910, p. 3.) †† **VYH**

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1147. **Ryan**, L. S. Mine commander's board. illus. (Journal of the United States artillery, Fort Monroe, v. 33, 1910, p. 33-37.) **VWA**

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1149. **Chalon**, Paul F. Effets produits par les explosions sous-marines; Explosions sous-marines; Application des explosifs aux travaux sous-marins. (In his: Les explosifs modernes, Paris, 1911, p. 607-670.) **VOG**

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1154. **Fletcher**, R. A. Warships and their story, with coloured frontispiece by Charles Dixon. London: Cassell & Company, Ltd., 1911. xxii, 348 p., 81 pl. illus. 8°. **VXR**

See index under torpedoes, torpedo boats, torpedo gunboats, torpedo nets, and torpedo tubes.

1155. [Der **Kleine Kreuzer** "Cassini," Minenleger.] (Schiffbau, Berlin, Jahrg. 13, 1911, p. 21.) † **VXA**

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1157. — Les mines sous-marines. (Moniteur de la flotte, Paris, année 58, no. 41, Oct. 14, 1911, p. 3.) †† **VYH**

1158. — Le sous-marin mouilleur de mines. (Moniteur de la flotte, Paris, tome 58, no. 6, Feb. 11, 1911, p. 3.) †† **VYH**

1159. — Les torpilles à réchauffeur d'air. (Moniteur de la flotte, Paris, année 58, no. 15, April 15, 1911, p. 3.) †† **VYH**

1160. **Naval** officer invents aerial torpedo. (Aeronautics, New York, v. 9, 1911, p. 141-142.) **VDS**

Invention of Paul E. Chamberlin, U. S. M. C.

1161. **Nouveaux** essais sur la commande à distance des bateaux et torpilles auto-

1911, continued.

mobiles. illus. (*Journal de la marine, le yacht*, Paris, année 34, 1911, p. 716-717.)

†† VXF

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VYL

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VXP

See index to Teil 5, p. 426, under Minen- und Torpedowesen.

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†† VWA

First United States government test of the torpedo invented by Cleland Davis, U. S. N.

1165. La **Torpille** de 533. (*Moniteur de la flotte*, Paris, année 58, no. 51, Dec. 23, 1911, p. 3.)

†† VYH

1912

1166. **Automatic** submarine mines. illus. (*Engineering*, London, v. 93, 1912, p. 520-524, 584-587.)

VDA

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VXA

1168. **Charmoille**. Les lancements à cône de choc. (*Journal de la marine, le yacht*, Paris, année 35, 1912, p. 401.)

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1169. The **Davis** gun-torpedo. illus. (*Engineer*, London, v. 113, 1912, p. 205-206.)

VA

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VXA

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†† VYH

1172. **Firing** submarine mines by wireless telegraphy. illus. (*Scientific American*, New York, v. 107, 1912, p. 101.)

VA

Invention of Dr. Branly, the French scientist.

1173. Die **Lancierungen** mit Manöversprengpatronen. (*Mitteilungen aus dem Gebiete des Seewesens*, Pola, Bd. 40, 1912, p. 1410-1413.)

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1175. — Nouvelles torpilles automobiles. (*Moniteur de la flotte*, Paris, année 59, no. 25, June 22, 1912, p. 3.)

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1176. **M., L.** Mines et poseurs de mines de blocus. (*Journal de la marine, le yacht*, Paris, année 35, 1912, p. 289-290.)

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1177. A **Mine-laying** squadron. (*Journal of the United States artillery*, Fort Monroe, Va., v. 38, 1912, p. 115-116.)

VWA

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1178. **Seeminen**. illus. (*Ueberall*, Berlin, Jahrg. 14, 1912, p. 322-327, 475-480.)

†† VXA

1179. **Skerrett**, Robert G. A new form of attack; a torpedo that carries a gun. illus. (*Scientific American*, New York, v. 107, 1912, p. 89, 94.)

VA

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1180. **Ueber** die Möglichkeit, Torpedoboote zu panzern. illus. (*Ueberall*, Berlin, Jahrg. 15, 1912, p. 57-61.)

†† VXA

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VXA

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1183. **Antona**, A. Cannone antisilurante. (*Rivista marittima*, Roma, anno 46, trimestre 2, 1913, p. 53-57.)

VXA

1184. L'**Augmentation** du calibre des torpilles automobiles. (*Cosmos*, Paris, nouv. série, tome 69, 1913, p. 145.)

VA

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VA

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The torpedo on capital ships.

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1188. Ceppi, Guillermo. Algunas consideraciones sobre la importancia del torpedo. (Boletín del Centro naval, Buenos Aires, tomo 31, 1913, p. 173-204.)

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1189. Charmoille. Le calibre de la torpille automobile. (Journal de la marine, le yacht, Paris, année 36, 1913, p. 433-434.)

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1190. — Torpilleurs d'escadre. (Journal de la marine, le yacht, Paris, année 36, 1913, p. 509-510.)

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A general article on torpedoes.

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VWA

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† VOA

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VA

1197. The French mine layers Cerbere and Pluton. illus. (Engineer, London, v. 116, 1913, p. 515.)

VA

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1326. — Providing a torpedo with ears. illus. (Popular science monthly, New York, v. 87, 1915, p. 489-496.) *** DA**

1327. [Checker-board system of microphone detectors.] (New York Times, Oct. 2, 1915, p. 3, col. 2.) *** D**

Described by E. F. Chandler and William Dubilier.

1328. **Cohen, Samuel.** Electricity and the modern automobile torpedo. illus. (Electrical experimenter, New York, v. 3, 1915, p. 266-267.) **VGA**

1329. **Conness, Leland.** Submarine mines. (Munsey's magazine, New York, v. 55, 1915, p. 257-265.) *** DA**

1330. **Davis, Edmund J.** Submarine attack. (Engineer, London, v. 119, 1915, p. 144.) **VA**

1331. **Development** of the science of mine-sweeping. (Royal United Service Institution, Journal, London, v. 60, 1915, p. 383-403.) **VWA**

1915, continued.

1332. **Development** of the torpedo. illus. (Arms and the man, Washington, v. 58, 1915, p. 145.) † MYA

1333. **Device** for steering torpedoes by wireless. (New York Times, July 24, 1915, p. 11, col. 3.) * D

Invention of Admiral Fiske for his new aerial torpedo boat.

1334. **Device** to render battleships immune from attack. (New York Times, July 20, 1915, p. 2, col. 4.) * D

Tried out in English waters and in the Dardanelles.

1335. **Dropping** bombs from aeroplanes. illus. (Scientific Australian, Melbourne, v. 20, 1915, p. 66.) VA

1336. **Dumas, A.** La torpille automobile. illus. (Le génie civil, Paris, tome 66, 1915, p. 401-408.) VA

1337. **Duquet, Alfred.** La torpille menaçante. (La revue, Paris, série 7, v. 110, 1915, p. 460-471.) * DM

1338. **Effect** of German torpedo on merchantman. (Popular mechanics, Chicago, v. 24, 1915, p. 33.) VFA

Illustration.

1339. **Electricity** in submarine mining. illus. (The electrical review, London, v. 77, 1915, p. 454-455.) VGA

1340. **English** methods in combating submarine peril. (New York Times, Dec. 2, 1915, p. 1, col. 3.) * D

Use of underwater telephones, motor boats, and aeroplanes.

1341. **Explosionen** unter Wasser. (Zeitschrift für das gesamte Schiess- und Sprengstoffwesen, München, Jahrg. 10, 1915, p. 116-118.) † VOA

1342. **Gentsch, Wilhelm.** Ueber den Antrieb selbstfahrender Torpedos im Auslande. (Verein zur Beförderung des Gewerbflusses, Verhandlungen, Berlin, Jahrg. 94, 1915, p. 469-496.) VA

1343. **German** incendiary bombs. illus. (Engineering, London, v. 99, 1915, p. 609.) VDA

1344. **Government** torpedo secrets safe. (Army and navy journal, New York, v. 52, 1915, p. 1292, 1295.) †† VWA

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1344a. **Grenades.** (Information annual, 1915, New York, 1916, p. 303.) Information Div.

1345. **Guenther, Hanns.** Torpedo-Flugzeuge. illus. (Technische Monatshefte: Technik für Alle, Stuttgart, Jahrg. 1915, Heft 10, p. 306-308.) VA

1346. **La Guerra** al commercio dal 1° agosto al 15 novembre 1915. (Rivista marittima, Roma, anno 48, trimestre 4, 1915, p. 217-232.) VXA

1347. **La Guerra** al commercio nei mari settentrionali d'Europa. Dall' inizio al 31 luglio 1915. (Rivista marittima, Roma, anno 48, trimestre 3, 1915, p. 104-120.) VXA

1348. **Guidoni, Alessandro.** Early experiments at launching torpedoes from an aeroplane. illus. (Flying, New York, v. 4, 1915, p. 539-540.) † VDS

1349. **Hinkamp, C. N.** Submarines and torpedoes. (American Society of Naval Engineers, Journal, Washington, v. 27, 1915, p. 438-453.) VXA

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1350. — Torpedoes and submarines, how they are operated, maneuvered and navigated. illus. (Scientific American supplement, New York, v. 80, 1915, p. 136-138.) VA

1351. **Horsnaill, W. O.** War beneath the waves: submarine mines. (Chambers's journal, London, series 7, v. 5, 1915, p. 293-294.) * DA

1352. — War beneath the waves: torpedoes. (Chambers's journal, London, series 7, v. 5, 1915, p. 198-200.) * DA

1353. **Huber, James.** Submarine mines; their design and their functioning. illus. (Engineering magazine, New York, v. 50, 1915, p. 120-121.) VDA

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1354. **Inventions** of Admiral Fiske. (Army and navy journal, New York, v. 52, 1915, p. 295, 1492, 1646.) †† VWA

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1355. **Is** there any defence against the submarine? (Scientific American, New York, v. 112, 1915, p. 152.) VA

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1356. **James, H.** Protection from torpedoes. (New York Times, June 21, 1915, p. 8, col. 6.) * D

1357. **Kaempffert, Waldemar.** Torpedoes. The Lusitania, and naval architecture. illus. (American review of reviews, New York, v. 51, 1915, p. 685-686.) * DA

1358. **Landminen.** illus. (Schuss und Waffe, Neudamm, Bd. 8, 1915, p. 141-143.) † VWA

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1359. **The Leon** torpedo. illus. (Engineer, London, v. 120, 1915, p. 196-197.) VA

1915, *continued*.

1360. **Leon** torpedo. (New York Times, Oct. 2, 1915, p. 3, col. 1.) *D
United States Navy experiments.

1361. **Leon** torpedo and detectors. (New York Times, Oct. 3, 1915, part 1, p. 3, col. 3.) *D

1362. **Loading** and firing submarine torpedoes. illus. (Scientific American, New York, v. 112, 1915, p. 485, 493.) VA

1363. **Machado**, Orlando. Pro submarino. (Revista maritima brasileira, Rio de Janeiro, v. 67, 1915, p. 2499-2507; v. 68, 1916, p. 527-532.) VXA

1364. **Magnetic** steerage of torpedoes. (English mechanic and world of science, London, v. 101, 1915, p. 483-484.) VA

1365. **Marine** mines; their purpose: how they are planted and how destroyed. illus. (Scientific American supplement, New York, v. 80, 1915, p. 388-389.) VA

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1366. **Maury**, Richard Lancelot. A brief sketch of the work of Matthew Fontaine Maury during the war, 1861-65. Richmond: Whittet & Shepperson, 1915. 36 p. 12°. V XV

Commander Maury's use of torpedoes in the Civil war.

1367. **Miessner**, B. F. A new solution for the problem of selectivity in torpedo control. illus. (Purdue engineering review, Lafayette, Ind., v. 15, 1915, p. 34-41.)

Tech. Div. — Vertical File

1368. **Moffett**, Cleveland. A new defense against the submarine. illus. (American magazine, New York, v. 79, April, 1915, p. 11-15, 96-100.) *DA

1369. The "**Nautilus**." [Cleveland, O.: Cleveland Twist Drill Co., 1915.] broadside. diagr. f°. †V XV

"Robert Fulton...was designer of the first successful submarine...the Nautilus."

1370. **Net** used by British Admiralty. (New York Times, Aug. 27, 1915, p. 4, col. 6.) *D

Invention of H. J. Reinhardt.

1371. **New** torpedo boat for coast defense. (New York Times, Sept. 29, 1915, p. 8, col. 2.) *D

Invention of E. F. Chandler.

1372. **New** type of bomb, for use by aeroplanes, patented, May 13, 1914. illus. (Engineering, London, v. 100, 1915, p. 127.) VDA

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1373. **Peculiarities** of torpedoes. illus. (New York Times, May 10, 1915, p. 8, col. 3.) *D

Discussion by United States naval officers.

1374. **Permanent** Court of Arbitration. The Hague convention (viii) of 1907 relative to the laying of automatic submarine contact mines. Washington: the endowment, 1915. iv, 6 p. 8°. (Carnegie Endowment for International Peace.—Division of International Law. Pamphlet 16.) XBN

1375. The **Portuguese** torpedo-boat destroyer Douro. illus. (Engineer, London, v. 119, 1915, p. 404.) VA
With illustration on p. 406.

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1378. **Proença**, Eduardo Justino de. Defesa contra submersiveis. (Revista maritima brasileira, Rio de Janeiro, v. 66, 1915, p. 1719-1723.) VXA

1379. **Protection** against torpedoes. (Engineer, London, v. 119, 1915, p. 41-42.) VA

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1381. **Robert** Fulton's experiments with submarines. (New York Times, Jan. 24, 1915, part 7, p. 3, col. 1.) *D

1382. **Roji**, Arsenio. Acorazados y sumergibles. (Revista general de marina, Madrid, tomo 76, 1915, p. 419-427.) VXA

1383. **Root**, E. N. Introduction of submarines as an instrument of war by Robert Fulton in 1807. (New York Times, Aug. 24, 1915, p. 10, col. 7.) *D

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1386. **Secor**, H. Winfield. Combating the submarine by electrical means. illus. (Electrical experimenter, New York, v. 3, 1915, p. 184-185.) VGA

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1388. **Selter.** Ueber Lufttorpedos. illus. (Zeitschrift für das gesamte Schiess- und Sprengstoffwesen, München, Jahrg. 10, 1915, p. 125-127, 142-144.) † VOA

1389. **Spear, L. Y.** The submarine of today and to-morrow. (Society of Naval Architects and Marine Engineers, Transactions, New York, v. 23, 1915, p. 201-216.) VXA

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1390. **Special** article on torpedoes. (New York Times, May 16, 1915, part 5, p. 4, col. 1.) * D

1391. **Submarine** attack swift and silent. (Marine review, Cleveland, v. 45, 1915, p. 328.) † VXA

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1392. **Submarine** torpedo that hunts its quarry. illus. (Popular mechanics, Chicago, v. 24, 1915, p. 11.) VFA

1393. **Thomas, C. O.** How a fast ocean liner can be torpedoed. (Canadian engineer, Toronto, v. 28, 1915, p. 696-697.) VDA

1394. **The Torpedo.** illus. (Marine engineer, London, v. 38, 1915, p. 7-10.) VXA

Outlines the development of the torpedo and gives valuable notes on the modern torpedo.

1395. **The Torpedo** damage to the steamship Gulfight. (Engineer, London, v. 120, 1915, p. 370.) VA

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1396. **Torpedo** fire directing. (Practical engineer, London, v. 52, 1915, p. 20-21.) VDA

1397. **Torpedo** guards. (United States Naval Institute, Proceedings, Annapolis, v. 41, 1915, p. 1339-1340, 1685-1687.) VXA

Professional notes.

1398. **Torpedo** that sank the Lusitania. (Army and navy journal, New York, v. 52, 1915, p. 1208.) †† VWA

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1399. **Torpedoes** launched in mid-air. (Scientific Australian, Melbourne, v. 20, 1915, p. 67-68.) VA

Note on the invention of Admiral Bradley A. Fiske, U. S. N.

1400. **La Torpille-mine** Leon. illus. (Le génie civil, Paris, tome 67, 1915, p. 91-92.) VA

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1402. **Trebesius, Ernst.** Torpedos, ihre Bauart und Wirkungsweise. illus. (Schuss und Waffe, Neudamm, Bd. 8, 1915, p. 163-168.) † VWA

1403. — Treibende Seeminen und ihre Beseitigung. (Ueberall, Berlin, Jahrg. 17, 1915, p. 551-552.) † VXA

1404. **Underground** warfare; mine and counter mine as they are used in the European war. (Illustrated London news, London, v. 147, 1915, p. 10-12.) * DA

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1406. **Warner, Oscar C.** The German naval offensive and defensive mine. illus. (Journal of the United States artillery, Fort Monroe, v. 43, 1915, p. 336-339.) VWA

1406a. **Where** a Zeppelin is vulnerable: and where it is protected. illus. (Sphere, London, v. 61, 1915, p. 232.) * DA

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1407. **Wireless** controlled air torpedo. (Aeronautics, New York, v. 17, 1915, p. 21, 28.) VDS

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1916

1408. **Aerial** torpedo torch lights battle field. illus. (Popular mechanics, Chicago, v. 26, 1916, p. 161-162.) VFA

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1410. **Aerial** torpedoes. Old devices that have been revived during the present war. illus. (Scientific American supplement, New York, v. 81, 1916, p. 132-133.) VA

1411. **Aero** wireless torpedo control. illus. (Wireless age, New York, v. 3, 1916, p. 364, 584-585, 774.) VGA

Invention of John Hays Hammond, Jr.

1412. **Aeroplane** guide for radio torpedo. (New York Times, Jan. 14, 1916, p. 1, col. 2.) * D

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1413. **Anti-submarine** torpedo used from aeroplane. illus. (Popular mechanics, Chicago, v. 25, 1916, p. 338-339.) VFA

1414. **Bannard, Walter.** A torpedo with eyes. illus. (Popular science monthly, New York, v. 88, 1916, p. 424-425.) * DA

1916, continued.

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VWA

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VXA

1417. **Belknap**, Reginald R. The torpedo and submarine branches of the German navy. (United States Naval Institute, Proceedings, Annapolis, v. 42, 1916, p. 1485-1508.)

VXA

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† VDS

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VIA

1420. **Buck** automatic aerial torpedo. illus. (Aerial age weekly, New York, v. 3, 1916, p. 445.)

† VDS

1421. **Cardile**, D. La questione del motore unico per i sommergibili. (Rivista marittima, Roma, anno 49, trimestre 4, 1916, p. 211-227.)

VXA

1422. **Carvalho Santos**, Firmino de. Torpedo moderno, seu emprego na guerra e sua adopção nos diferentes typos de navios. (Revista maritima brasileira, Rio de Janeiro, v. 69, 1916, p. 27-43.)

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1423. **Cerio**, Edwin. The rapid-fire, "revolver" principle applied to the submarine torpedo tube. illus. (Scientific American, New York, v. 114, 1916, p. 395, 409.)

VA

1424. — Sull' armamento silurante dei sommergibili d'alto mare. illus. (Rivista marittima, Roma, anno 49, trimestre 1, 1916, p. 295-297.)

VXA

1425. **Cooper**, W. F. Hull protection against the torpedo. (Scientific American, New York, v. 115, 1916, p. 437.)

VA

1426. **Craven**, Francis S. Accurate measurement of torpedo ranges. illus. (United States Naval Institute, Proceedings, Annapolis, v. 42, 1916, p. 1225-1236.)

VXA

1427. A **Deadly** man-steered torpedo. (Popular science monthly, New York, v. 89, 1916, p. 694-695.)

* DA

1428. **Detonation** of submarine mines by electricity. illus. (Scientific American supplement, New York, v. 81, 1916, p. 253.)

VA

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1429. **Dreadnought** o sommergibile? (Rivista marittima, Roma, anno 49, trimestre 1, 1916, p. 587-601.)

VXA

1430. **Fernández**, Gustavo. Protección submarina de los acorazados. (Revista general de marina, Madrid, tomo 79, 1916, p. 5-15.)

VXA

1431. **Flowers**, John B. Torpedo screen for ships under way. Building up wall of whirling plates in the path of a submarine torpedo. illus. (Scientific American, New York, v. 115, 1916, p. 406, 421.)

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1432. The **German** submarine mine-layer U C 5. illus. (Illustrated London news, London, v. 149, 1916, p. 127-129.)

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1433. **Giacomuzzi**, Virgilio. Torpediniere, cacciatorpediniere e derivati. (Rivista marittima, Roma, anno 49, trimestre 2, 1916, p. 477-503.)

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1434. A **Giant** electric torpedo that eats thru the earth. illus. (Electrical experimenter, New York, v. 4, 1916, p. 551.)

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1434a. **Grenades**, mortar shells and bombs. (Army and navy journal, New York, v. 54, 1916, p. 113.)

†† VWA

Editorial. Definition of these low velocity projectiles and description of their use.

1435. **Hammond** radio-controlled torpedo. (New York Times, Aug. 29, 1916, p. 9, col. 2.)

* D

Major General Leonard Wood, head of joint army and navy board to pass on Hammond torpedo.

1436. **Hammond** wireless torpedo. (New York Times, Feb. 3, 1916, p. 6, col. 4.)

* D

Discussion by Rear Admiral Strauss before the House Naval Committee.

1437. **Hoar**, Allen. The submarine torpedo boat: its characteristics and modern development. New York: D. Van Nostrand Co., 1916. xv, 211 p., 4 diagrs. illus. 8°.

VXV

1438. **How** mines are laid and fired. illus. (Popular mechanics, Chicago, v. 26, 1916, p. 68-69.)

VFA

1439. **Lohr**, Carl A. The principles involved in the mine defense of harbors. (Journal of the United States artillery, Fort Monroe, v. 45, 1916, p. 299-313.)

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1440. **López**, Lutgardo. El torpedo "Bliss." Varias patentes de la casa Bliss para torpedos automóviles. illus. (Revista general de marina, Madrid, tomo 79, 1916, p. 697-716.)

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1442. A Man-controlled torpedo. illus. (Scientific American, New York, v. 115, 1916, p. 393.) VA

1443. Mazzinghi, R. I sommergibili e i mezzi aerei nel blocco commerciale. (Rivista marittima, Roma, anno 49, trimestre 1, 1916, p. 445-462.) VXA

1444. Miessner, Benjamin Franklin. Radiodynamics, the wireless control of torpedoes and other mechanisms. New York: D. Van Nostrand Co., 1916. v, 206 p. illus. 8°. PGO

Ch. 11: The advent of wirelessly controlled torpedoes, p. 78-88. Ch. 12: Selectors, p. 89-91. Ch. 13: European control systems, p. 92-106. Ch. 14: Work of the Hammond radio research laboratory, p. 107-123. Ch. 15: The solution of the problems related to battle-range torpedo control, p. 124-136.

Also has notes on the inventions of Benjamin Franklin, Ernest Wilson, Nikola Tesla, J. Gordon, Devaux C. Wirth, E. Branley, and John Hays Hammond, Jr.

1445. Mine control protects neutral shipping. illus. (Popular mechanics, Chicago, v. 26, 1916, p. 481-482.) VFA

1446. Mines (at sea). (Information annual, 1915, New York, 1916, p. 389-390.) Information Div.

1447. Moore, Willard G. A time-controlled aerial torpedo. illus. (Aviation and aeronautical engineering, New York, v. 1, 1916, p. 322-323.) †VDS

1448. Muniz Barreto, Edmundo Williams. O contra-torpedeiro na esquadra moderna. (Revista maritima brasileira, Rio de Janeiro, v. 68, 1916, p. 201-220.) VXA

1449. Nets to protect warships from torpedoes. illus. (Popular mechanics, Chicago, v. 26, 1916, p. 830.) VFA

1450. Nordmann, Charles. La torpille et les immersibles. (Revue des deux mondes, Paris, période 6, tome 36, 1916, p. 217-228.) *DM

A very comprehensive article. The author states that the submarines of the Deutschland type are modifications of the inventions of French engineers.

1451. Procacci, Gianni. Impianto di bussola magnetica per sommergibile. illus. (Rivista marittima, Roma, anno 49, trimestre 2, 1916, p. 168-177.) VXA

1452. Proença, Nicanor J. de. Em torno do submarino. (Revista maritima brasileira, Rio de Janeiro, v. 68, 1916, p. 221-224.) VXA

1452a. — Os submersiveis na presente guerra. (Revista maritima brasileira, Rio de Janeiro, v. 68, 1916, p. 677-682.) VXA

1453. Protecting a battleship against torpedoes. (Popular science monthly, New York, v. 90, 1916, p. 81.) *DA

1454. Protection against submarine torpedo attack. (New York Times, Feb. 6, 1916, part 5, p. 7, col. 1.) *D

Article on invention by M. Weil.

1455. Rosso, Alessandro Giovanni. I sommergibili nel diritto della guerra marittima. (Rivista marittima, Roma, anno 49, trimestre 4, 1916, p. 369-396; anno 50, trimestre 1, 1917, p. 27-44.) VXA

1456. S., E. D. Artiglieria per la difesa contro i sommergibili. (Rivista marittima, Roma, anno 49, trimestre 3, 1916, p. 323-326.) VXA

1457. Sea-going submarines and their torpedo armaments. (Scientific American, New York, v. 114, 1916, p. 396.) VA

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1458. Ship's under-water eye sights hidden mines. illus. (Popular mechanics, Chicago, v. 25, 1916, p. 161.) VFA

1459. Ships proof against the torpedo. (Scientific American, New York, v. 115, 1916, p. 95.) VA

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Brief note.

1460. Snow, Chester R., and HAROLD G. DOUGLAS. Mine efficiency from storehouse to dock. illus. (Journal of the United States artillery, Fort Monroe, v. 46, 1916, p. 319-332.) VWA

1461. Sunderland, Archibald H. The S. S. "Noordam" and a mine. illus. (Journal of the United States artillery, Fort Monroe, v. 45, 1916, p. 314-316.) VWA

1462. Test of Hammond wireless control torpedo. (Army and navy journal, New York, v. 54, 1916, p. 338-339.) ††VWA

Tests made at Gloucester, Mass.

1463. Torpedo catcher. (New York Times, Aug. 14, 1916, p. 4, col. 6.) *D

Invention of F. Lapan tried out at Newport.

1464. Torpedo nets. (Scientific American, New York, v. 114, 1916, p. 297.) VA

Brief note.

1465. Torpedo supply. (New York Times, May 1, 1916, p. 6, col. 5.) *D

Newport station turns out better variety than those purchased in Europe.

1466. Torpedo tubes. illus. (Marine engineer, London, v. 38, 1916, p. 124-125.) VXA

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1467. Torpedo tubes in large warships. (Engineer, London, v. 121, 1916, p. 441-442.) VA

Valuable historical notes on the evolution of the torpedo.

1916, continued.

1468. [United States torpedo.] (New York Times, Feb. 10, 1916, p. 3, col. 8.) *D

1469. Vibrations of enemy ship steer new torpedo. illus. (Popular mechanics, Chicago, v. 26, 1916, p. 815.) VFA

1469a. Wellenstein, A. Untersuchung einer feindlichen Flieger-Brandbombe. Welche Massnahmen sind bei feindlichen Fliegerangriffen mit Brandbomben zu beobachten? (Chemiker-Zeitung, Cöthen, Jahrg. 40, 1916, p. 9-10.) ††VOA

Test of an incendiary bomb dropped in the city of Trier. Gives directions for extinguishing fires set by these bombs.

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1471. Wildrick, Meade. Effect upon measures for coast defense of the development of submarine and aerial attack. illus. (Journal of the United States artillery, Fort Monroe, v. 45, 1916, p. 145-180.) VWA

Valuable notes on mines and torpedoes.

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1476. Chandler, Edward F. The modern automobile torpedo. illus. (Scientific American, New York, v. 116, 1917, p. 548-549, 563-565.) VA

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1497. Torpedoplane invented by Rear-Admiral Fiske. illus. (United States Naval Institute, Proceedings, Annapolis, v. 43, 1917, p. 1524-1526.) VXA

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1498. United States. — Naval Intelligence Office. A brief description of submarine mines... Washington: Gov. Prtg. Off., 1917. 8 f. illus. 8°. V XV

1498a. United States. — Ordnance Office, War Department. Description and instructions for the use of rifle and hand grenades. Washington: Gov. Prtg. Off., 1917. 14 p., 3 pl. 8°. VOD p. box

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1500. Weaver, Erasmus Morgan. Notes on military explosives. New York: John Wiley & Sons, Inc., 1917. viii, 382 p. 8°. VOG

Precautions to be observed in charging torpedoes and shell with high explosives, p. 241-242.

1501. Woodhouse, Henry. Textbook of naval aeronautics. With introduction by Rear Admiral Bradley A. Fiske. New York: The Century Co., 1917. 7 p.l., 3-288 p. illus. f°. † VDY

How the revolutionary Leavitt torpedo was developed, p. 14-15. The torpedoplane and its possibilities, Bradley A. Fiske, p. 16-19. Locating submerged mines with aircraft, p. 51-52.

SUPPLEMENT

1586

1502. Collado, Luys. *Pratica manvale di artiglieria; nella quale si tratta della inuentione di essa, dell' ordine di condurla, & piantarla sotto à qualunque fortezza, fabricar mine da far volar in alto le fortezze, spianar le montagne, diuertir l'acque offensive à i regni & prouincie, tirar co i pezzi in molti & diuersi modi, far fuochi artificiali; con altri bellissimi secreti all' essercitio dell' artiglieria appartenenti. Nuouamente composta & data in luce dal Mag. Signor Lvgi Collado. In Venetia, Presso Pietro Dusinelli, 1586. 6 p.l., 92 f., 1 diagr. illus. i°.* † **VWW**

1775

1503. Gale, Benjamin. [The American Turtle, built at Saybrook by David Bushnell.] (Connecticut Historical Society. Collections, Hartford, v. 2, 1870, p. 315-318, 322-323, 333-335.) **IAA**

Letters to Silas Deane, written from Killingworth, Conn., Nov. 9, 22, and Dec. 7, 1775, in which he gives a report on the progress made on "our machine," the "American Turtle," invented by David Bushnell. Gale also states that Dr. Franklin was consulted in regard to its construction, and gives a description of the submarine and explains the method of using the explosive.

1778

1504. Symons, J. [Report on David Bushnell's attempt to blow up the *Cerberus*.] (The Remembrancer; or, Impartial repository of public events for the year 1778. London, 1778, p. 90-92.) **Reserve**

Letter written by the commander of the *Cerberus* to Rear Admiral Sir Peter Parker, giving an account of the attempted destruction of his ship by Bushnell's "infernal machine."

Symons reports that the torpedo was taken from the water by four men in a small boat and through their "fatal curiosity" the mechanism was examined with the result that "it blew the boat into pieces, and set her in a flame, killed the three men that were in the stern; the fourth, who was standing forward, was blown into the water." From this survivor the description of the torpedo was secured and a model made, which was forwarded to Admiral Parker. Symons remarks that the "ingenuity of these people is singular in their secret modes of mischief."

This letter is abstracted in Thomas Clark, *Naval history of the United States*, Philadelphia, 1814, v. 1, p. 72-74, 1°YE.

1813

1505. Clark, Thomas. *Sketches of the naval history of the United States.* Philadelphia, 1813. 12°.

Chap. 5, p. 39-41. The torpedo, or American Turtle. **VYE**

1814

1506. Clark, Thomas. *Naval history of the United States, from the commencement of the Revolutionary war to the present time.* Philadelphia, 1814. 2 v. 2. ed. 12°. **VYE**
v. 1, chap. 5, p. 63-74. D. Bushnell, inventor of the torpedo, &c.

Reprints letter written by Bushnell to Thomas Jefferson in October, 1787, giving a full account of his torpedo and submarine; also his experiments made with the design of firing shipping, and his attempt to destroy the *Cerberus*.

1815

1507. Notice sur les fusées incendiaires de Congrève; suivie de la description et de l'analyse qui en a été faite par M. d'Arcet. 1 pl. (Annales des arts et manufactures, Paris, 1815, tome 55, p. 52-76.) **VA**

Description and analysis of incendiary rockets. Notes their use at the battle of Leipzig.

1819

1508. Petitot, Claude Bernard. *De la défaite et de la prise du Comte de Pembroc devant la Rochelle, par les flotes de France et d'Espagne dont la première étoit commandée par Ivain de Galles.* (In his: Collection complète des mémoires... Paris, 1819. 8°. v. 5, p. 110-123.) **DBA**

Gives account of the use of fire ships at La Rochelle at the defeat of the Earl of Pembroke.

1845

1509. Reinaud, Joseph Toussaint, and ILDEPHONSE FAVÉ. *Histoire de l'artillerie, 1^{re} partie. Du feu grégeois, des feux de guerre et des origines de la poudre à canon d'après des textes nouveaux.* Paris: J. Dumaine, 1845. 2 p.l., 285 p., 1 l., 8°, and atlas of 17 pl., 4°. **VWW**

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1861

1510. A Rebel torpedo. illus. (Frank Leslie's illustrated newspaper, New York, v. 13, 1861, p. 352.) *** DA**

1865

1511. Die Hoellenmaschinen oder Torpedo's des neueren amerikanischen Krieges. (Dingler's polytechnisches Journal, Augsburg, Bd. 176, 1865, p. 107-109.) **VA**

1865, *continued*.

1512. Sketch of a torpedo picked up in Morganza Bend, Mississippi river, by the crew of the U. S. S. Lafayette. (Frank Leslie's illustrated newspaper, New York, v. 20, 1865, p. 189.) *DA

1868

1513. Figuiet, Louis. Les poudres de guerre. (In his: Les merveilles de la science, Paris, tome 3, 1868, p. 209-308.) V

A very complete historical article, giving data on Greek fire, use of fire barrels on land and on ships, incendiary bombs, fire lances, and incendiary chariots. Greek fire used at the siege of Constantinople in 1453.

1870

1514. John Ericsson's neues System für den unterseeischen Angriff. (Dingler's polytechnisches Journal, Augsburg, Bd. 197, 1870, p. 120-127.) VA

From *Militär-Wochenblatt* for May 11, 1870.

1515. Neuer Torpedo von John Ericsson. (Dingler's polytechnisches Journal, Augsburg, Bd. 196, 1870, p. 429-435.) VA

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Review of work by J. S. Barnes entitled *Submarine warfare, offensive and defensive*, New York, 1870. Also reviewed in *Van Nostrand's eclectic engineering magazine*, New York, v. 2, 1870, p. 409-412, *V.D.A.*

1871

1517. The Harvey torpedo. illus. (Engineering, London, v. 11, 1871, p. 35-36.) VDA

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1874

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1876

1521. Betts, J. A. Torpedoes and torpedo warfare. (Telegraphic journal and electrical review, London, v. 4, 1876, p. 293-295, 304-305.) VGA

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On the use of liquid sulphid in torpedoes.

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Imperial Torpedo College at Tientsin, Mr. J. A. Betts, director.

1877

1525. The Eastern war. Turkish divers removing Russian torpedoes off Poti in the Black sea. illus. (Frank Leslie's illustrated newspaper, New York, v. 44, 1877, p. 407.) *DA

Full-page illustration on p. 408.

1526. Gakuma, G. Torpedoes, their history, construction and use. (Frank Leslie's illustrated newspaper, v. 44, 1877, p. 239.) *DA

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1528. A Telescope spar torpedo. (Telegraphic journal and electrical review, London, v. 5, 1877, p. 196.) VGA

Brief note on experiment made at the Woolwich laboratory.

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Historical notes.

1530. Whitehead torpedo. (Polytechnic review, Philadelphia, v. 4, 1877, p. 93, 105.) VA

Brief notes.

1879

1531. **Goodrich**, Caspar Frederick. Torpedoes, their disposition and radius of destructive effect. (United States Naval Institute, Proceedings, Annapolis, v. 5, 1879, p. 479-491.) **VXA**

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1881

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Experiments made at Portsmouth in detecting the approach of a torpedo.

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1882

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1883

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Note on torpedoes.

1536. **Luft-Treibtorpedos**. (Dingler's polytechnisches Journal, Augsburg, Bd. 250, 1883, p. 138.) **VA**

1537. **Neuerungen** an den in der Deutschen Marine gebräuchlichen Torpedos. (Dingler's polytechnisches Journal, Augsburg, Bd. 248, 1883, p. 362-363.) **VA**

1538. **Ueber** Neuerungen an Torpedobooten. (Dingler's polytechnisches Journal, Augsburg, Bd. 247, 1883, p. 56-64.) **VA**

Notes on Bushnell, Fulton, Harvey, Fish, Whitehead, and Nordenfeldt torpedoes.

1884

1539. **Knight**, Edward Henry. Knight's new mechanical dictionary. Boston: Houghton, Mifflin and Co., 1884. viii, 960 p., 56 pl. illus. 4°. **VF**

Torpedoes, p. 897-899.

1540. **New** torpedo boats. (Telegraphic journal and electrical review, London, v. 15, 1884, p. 176.) **VGA**

Notes on John Ericsson's boat and Professor Tuck's electric submarine torpedo boat.

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1542. **Th. Nordenfeldt's** Kartätschgeschütz. (Dingler's polytechnisches Journal, Augsburg, Bd. 254, 1884, p. 429-432.) **VA**

1885

1543. **Canet's** Geschütz zum Schleudern von Fischtorpedos. illus. (Dingler's polytechnisches Journal, Augsburg, Bd. 255, 1885, p. 21-23.) **VA**

1544. A **New** torpedo guide. (Telegraphic journal and electrical review, London, v. 16, 1885, p. 360.) **VGA**

Brief description of new method of controlling torpedoes.

1545. **Paulson's** self propelling and steering torpedo. illus. (Telegraphic journal and electrical review, London, v. 16, 1885, p. 213-215.) **VGA**

Invention of Richard Paulson.

1886

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Experiments made in September, 1886.

1547. **Torpedoes**. (In: United States.—Office of Naval Intelligence, General information series no. 5, Washington, 1886, p. 246-254.) **VYEB**

Notes on the Whitehead, Howell, Sims-Edison, Patrick, Paulson, and Berdan torpedoes, on torpedo nets and on the torpedo experiments at Cherbourg.

1548. **Torpedoes** electrically steered. (Telegraphic journal and electrical review, London, v. 18, 1886, p. 237.) **VGA**

Brief note on invention of Thomas A. Edison.

1549. **Value** of torpedoes. (Telegraphic journal and electrical review, London, v. 19, 1886, p. 79.) **VGA**

Notes on the Whitehead torpedo and experiments made in Farcham creek.

1887

1550. **Dynamite** in war, the pneumatic torpedo gun. illus. (Manufacturer and builder, New York, v. 19, 1887, p. 128-129, 158-159, 182-184.) **VA**

Notes on the Lay, Patrick, and Sims torpedoes.

1887, *continued*.

1551. Kesselheizung mit flüssigen Kohlenwasserstoffen. (Dingler's polytechnisches Journal, Augsburg, Bd. 266, 1887, p. 202-208.) **VA**

1552. The Lay torpedo. (Telegraphic journal and electrical review, London, v. 20, 1887, p. 211, 217-218.) **VGA**

Notes on experiments.

1553. Ein Neuer Torpedo. (Mittheilungen aus dem Gebiete des Seewesens, Pola, Bd. 15, 1887, p. 390.) **VXA**

From the *United service gazette*. Reprinted in *Dingler's polytechnisches Journal*, Stuttgart, Bd. 267, 1888, p. 142, *VA*.

Notes on the torpedo invented by Edward C. Peck.

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1555. Schroeder, Seaton. The development of modern torpedoes. (In: United States.—Naval Intelligence Office. General information series no. 6: Recent naval progress, Washington, 1887, p. 1-44, 332-336.) **VYEB**

Notes on the following types of torpedoes: Berdan, Harvey, Barber, Burdett, Chambers, Whitehead, Rendel, Schwartzkopff, Howell, Mallory, Hall, Paulson, Callender, Lay, Patrick, Coda-Canati, Von Scheliha, Smith, Foster, Nordenfeldt, Nealy, Scott, Sims-Edison, and Brennan.

1556. Torpedo boats. (Telegraphic journal and electrical review, London, v. 21, 1887, p. 73, 297.) **VGA**

Brief description of the *Ariete* and *Benbow*.

1888

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[v. 1.] Text.

[v. 2.] Atlas.

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Notes on torpedoes, p. 481, 488.

1559. New electrical torpedo. (Telegraphic journal and electrical review, London, v. 22, 1888, p. 682.) **VGA**

Brief note on the Nordenfeldt torpedo.

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Torpedo experiments at College Point, with description of torpedo.

1889

1562. King, William R. Annual report, Willets Point, N. Y., Engineer School of Application. pl. (In: United States.—Engineer Department. Annual report of the chief of engineers, Washington, 1889, part 1, p. 467-502.) **VDDA**

Reports on torpedo experiments, p. 478-483, 489-490, 492; Report of a board of engineers on the Patrick "auto-mobile controllable torpedo," p. 497-502.

1563. Neues im Schiffswesen. (Dingler's polytechnisches Journal, Stuttgart, Bd. 272, p. 529-539.) **VA**

Descriptions of German patents granted to G. E. Haight, W. H. Wood, J. O. Kelly, B. A. Collins, H. S. Maxim, S. H. Nealy, L. Hutchins, T. Favarger, A. Corssen, and Graf Buonacorsi di Pistoja.

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1565. Newton, J. T. Fish-torpedo armament. 4 diagrs., 1 pl. (In: United States.—Office of Naval Intelligence, General information series no. 8, Washington, 1889, p. 185-198.) **VYEB**

1566. — Torpedoes. (In: United States.—Office of Naval Intelligence, General information series no. 8, Washington, 1889, p. 428-436.) **VYEB**

Notes on the Whitehead, Schwartzkopff, Howell, Brennan, Patrick, Sims-Edison, and Pietruski torpedoes.

1890

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Inventor of a torpedo boat destroyer and the famous *Monitor*.

1568. Ellicott, John M. Automobile torpedoes, the Whitehead and Howell with a detailed description of each. 12 diagrs. (In: United States.—Office of Naval Intelligence, General information series, no. 9, p. 381-408.) **VYEB**

1569. The Gifford liquid-gas gun. illus. (Engineering news, New York, v. 24, 1890, p. 121.) **VDA**

1570. Russische Kriegsschiffe. (Dingler's polytechnisches Journal, Stuttgart, Bd. 276, 1890, p. 597.) **VA**

Notes on torpedoes.

1571. Southerland, W. H. H. Torpedoes. (In: United States.—Naval Intelligence Office. General information series no. 9: A year's naval progress, Washington, 1890, p. 134-138.) **VYEB**

Notes on the Whitehead and Brennan torpedoes and the torpedo-director.

1891

1572. **Sims-Edison** automatic torpedo. illus. (Western electrician, Chicago, v. 8, 1891, p. 333.) **VGA**

1573. **Southerland**, W. H. H. Torpedoes. illus. (In: United States. — Naval Intelligence Office. General information series no. 10: The year's naval progress, Washington, 1891, p. 176-181.) **VYEB**

1574. **Trial** of the Sims-Edison torpedo. (The manufacturer and builder, New York, v. 23, 1891, p. 186.) **VA**

1892

1575. **Submarine** navigation. (The manufacturer and builder, New York, v. 23, 1892, p. 168.) **VA**

Note on the early history of the submarine and torpedo.

1576. **Torpedoboote** und **Torpedodepot-schiffe**. (Dingler's polytechnisches Journal, Stuttgart, Bd. 284, 1892, p. 22-23.) **VA**

Notes on various types of torpedoes.

1577. **Torpedoes** [and] **Torpedo** defense. 2 diagrs. (In: United States. — Office of Naval Intelligence, General information series no. 11: Notes on the year's naval progress, Washington, 1892, p. 128-135.) **VYEB**

Notes on the Sims-Edison and the Whitehead torpedoes, and the Ericsson submarine gun; also on torpedo-boom experiments, net-cutting attachments, and torpedo-discharging apparatus.

1578. **Trials** of the torpedo boat "Cushing." (Engineering news, New York, v. 27, 1892, p. 10.) **VDA**

1893

1579. **Robert** Fulton. port. (In: National cyclopaedia of American biography, New York, v. 3, 1893, p. 104-105.) *** R - AGZ**

Notes on his torpedo and submarine.

1580. **Sears**, James H., and B. W. **Wells, Jr.** The Chilean revolution of 1891. Washington: Gov. Prtg. Off., 1893. 66 p., 2 charts, 1 diagr., 4 maps, 3 pl., 1 table. 8°. (United States. — Office of Naval Intelligence. War series. no. 4.) **VYEB**

The sinking of the *Blanco Encalada*, p. 18-24.

Official reports of the commanding officers on both sides are given in full, and extracts from the report of the commission appointed to examine into the possibility of raising the *Blanco Encalada*.

1581. **Thomas** Alva Edison. port. (In: National cyclopaedia of American biography, New York, v. 3, 1893, p. 441-444.) *** R - AGZ**

Inventor of torpedo.

1894

1582. **Torpedo** launch for the U. S. battleship "Maine." illus. (Engineering news, New York, v. 32, 1894, p. 432-433.) **VDA**

1896

1583. **John** Adams Howell. (In: National cyclopaedia of American biography, New York, v. 6, 1896, p. 44.) *** R - AGZ**

Inventor of the Howell torpedo.

1584. **Matthew** Fontaine Maury. (In: National cyclopaedia of American biography, New York, v. 6, 1896, p. 35-36.) *** R - AGZ**

Inventor of torpedo mines.

1585. **Samuel** Colt. (In: National cyclopaedia of American biography, New York, v. 6, 1896, p. 175-176.) *** R - AGZ**

Inventor of submarine mines.

1586. **William** Henry Shock. (In: National cyclopaedia of American biography, New York, v. 6, 1896, p. 200.) *** R - AGZ**

Inventor of torpedo devices.

1897

1587. **Alexander** Thompson Ballantine. port. (In: National cyclopaedia of American biography, New York, v. 7, 1897, p. 540.) *** R - AGZ**

Inventor of oil-well torpedoes.

1588. **Edmund** Louis Gray Zalinski. port. (In: National cyclopaedia of American biography, New York, v. 7, 1897, p. 248.) *** R - AGZ**

Inventor of the pneumatic torpedo-gun.

1589. **George** Bomford. (In: National cyclopaedia of American biography, New York, v. 7, 1897, p. 495.) *** R - AGZ**

Inventor of a bomb cannon, known as the "columbiad."

1590. **John** Lewis Lay. (In: National cyclopaedia of American biography, New York, v. 7, 1897, p. 528-529.) *** R - AGZ**

Inventor of the Lay torpedo.

1591. **Thomas** Oliver Selfridge. (In: National cyclopaedia of American biography, New York, v. 7, 1897, p. 552.) *** R - AGZ**

Inventor of devices for protecting ships from torpedoes.

1898

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Notes on his torpedo and submarine.

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Valuable notes on the use of the torpedo during the Civil war.

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1596. Trial of new torpedo nets. (United States Naval Institute, Proceedings, v. 24, 1898, p. 385.) **VXA**

Trial of torpedo nets on H. M. S. "Hannibal."

1899

1597. Koester, O. W. The torpedo-boat, destroyer, and depot. (United States Naval Institute, Proceedings, v. 25, 1899, p. 851-855.) **VXA**

1901

1598. Scott de Martinville. Avant-propos d'un appareil de débarquement de torpilleurs embarqués sur le transport Mytho. (Mémorial du génie maritime, Paris, série 3, fasc. 2, 1901, p. 151-176.) **VXA**

1905

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1906

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1602. Hudson Maxim. port. (In: National cyclopaedia of American biography, New York, v. 13, 1906, p. 520-521.) **R - AGZ**

Inventor of an automobile torpedo.

1603. Infernal machine discussed by great experts. illus. (Illustrated London news, London, v. 128, 1906, p. 836-837.) **DA**

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1907

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1908

1606. Given, E. C. Submarines and submersibles. (Liverpool Engineering Society, Transactions, Liverpool, v. 29, 1908, p. 129-196.) **VDA**

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1909

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Inventor of a system of submarine mine defense.

1910

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Howell torpedo, p. 72-73; The Obry device, p. 73-74.

1616. Die **Entwicklung** der Seemine und die Grundzüge ihrer Verwendung. illus. (Nauticus: Jahrbuch für Deutschlands Seeinteressen, Berlin, Jahrg. 15, 1913, p. 189-226.) **VYL**

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Application to torpedoes, p. 636-637.

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Illustration of discharge of torpedo.

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1635. **Torpedo** nets. (Shipbuilding and shipping record, London, v. 3, 1914, p. 410.) **†VXH**

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1636. **Wood**, Walter. Mine sweeping. illus. (Navy and army illustrated, London, new series, v. 1, 1914, p. 147-148.) **†VWZH**

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1638. **Aubigny**, P. d'. Un nouvel explosif de guerre, la thermite. (La Revue, Paris, 1915, v. 111, p. 528-531.) ***DM**

Invention of John Hays Hammond, jr. Data on incendiary shell generating prussic acid gas.

1639. **B., M.** Eine behelfsmässig hergestellte Handgranathaubitze (Handgranatschleuder). (Kriegstechnische Zeitschrift, Berlin, Jahrg. 17, 1914, p. 29-32.) **VWA**

1915, continued.

1640. **Bennett, Arnold.** In the fire-trenches. illus. (Illustrated London news, London, 1915, v. 147, p. 258-259.) * DA

Illustration of a bomb mortar, p. 259.

1641. **Les Bombes incendiaires employées par les dirigeables et les avions allemands.** illus. (Génie civil, Paris, tome 67, 1915, p. 11.) VA

1642. **Bradwood, W.** War missiles, ancient and otherwise. (The Field, London, v. 125, 1915, p. 525-527.) † VPA

A very complete article; gives history of the Greek fire and the use of petroleum in inflammable missiles.

1643. **British bomb-throwers in action at La Bassée.** illus. (Illustrated London news, v. 146, 1915, p. 490-491.) * DA

1644. **The Business end of a submarine.** illus. (Navy and army, London, new series, v. 4, 1915, p. 108-109.) † VWZH

Illustration of the breech blocks of a Holland submarine, showing four torpedo tubes arranged in pairs on each side of the central hand wheel.

1645. **C., J.** Air-torpedoes and air-mines, and the weapons that fire them. illus. (Illustrated London news, London, v. 147, 1915, p. 309.) * DA

Illustration of the firing of an air-mine weighing 236 pounds.

1646. — French trench guns: crapouillot; taupia; and arbalist. illus. (Illustrated London news, London, v. 147, 1915, p. 308.) * DA

Fine illustrations showing use of these guns.

1647. **Cossmann, Edward C.** Hand grenades. illus. (Scientific American, New York, 1915, v. 112, p. 427.) VA

1648. **Fire warnings: how to deal with bombs.** (Illustrated carpenter and builder, London, v. 77, 1915, p. 346.) † 3 - VEA

1649. **Flamel, Nicolas.** Les torpilles aériennes. illus. (La nature, Paris, année 43, semestre 2, 1915, p. 263-266.) OA

Gives valuable historical notes on the bomb and several cuts of trench cannon.

1650. **The Force of the torpedo of the kind which sunk the "Lusitania."** illus. (Illustrated London news, London, v. 146, 1915, p. 613.) * DA

Illustration of damage done a ship by the explosion of a torpedo.

1651. **German flame-projectors in use: French testing "Flammenwerfer" captured from the enemy.** (Illustrated London news, London, v. 147, 1915, p. 330-331.) * DA

1652. **German incendiary bombs.** illus. (Applied science, Toronto, v. 27 [new series, v. 10], 1915, p. 50-51.) VA

1653. **German Zeppelin raids over Great Britain.** (Sphere, London, v. 62, 1915, p. 296-297, 334.) * DA

1654. **Die Gewehr- und Handgranate der indischen Armee.** illus. (Kriegstechnische Zeitschrift, Berlin, Jahrg. 18, 1915, p. 88-89.) VWA

1655. **The Grasshopper and the torpedo of the air.** illus. (Illustrated London news, London, v. 147, 1915, p. 144-145.) * DA

Illustration of crossbow for hurling bombs, etc., also the torpedo shell.

1656. **The Greatest war.** By Colonel "X." illus. (Navy and army, London, new series, v. 4, p. 158-161.) † VWZH

Part I. The war on land.

Gives illustrations of a German poisonous gas bomb mortar and French soldiers hurling grenades at the German trenches.

1657. **Guenther, Hanns.** Handgranaten. illus. (Schweizerische militärische Blätter: Schweizerische Monatschrift für Offiziere aller Waffen, Frauenfeld, Jahrg. 27, 1915, p. 192-196, 234-240.) VWA

1658. **The "Gulflight" case.** illus. (Literary digest, New York, v. 50, 1915, p. 1135.) * DA

Valuable notes on the torpedoing of this ship.

1659. **Hand grenade.** illus. (Engineer, London, v. 120, 1915, p. 566.) VA

Reprinted in *Génie civil*, Paris, tome 68, 1916, p. 141, *I.A.*

Description of English patent issued Nov. 17, 1915, to F. E. Baker.

1660. **Illustration of bomb used by the Allies' airmen at Gallipoli.** (Illustrated London news, London, v. 147, 1915, p. 685.) * DA

1661. **Lake, Simon.** Submarines that are strictly invisible; a type that can pass through a mine field and attack a blockaded fleet. illus. (Scientific American, New York, v. 112, 1915, p. 68-69, 74-75.) VA

Abstracted in *Illustrated London news*, v. 146, 1915, p. 210-211, * *D.A.*, under title: A wheeled submarine designed to motor through mine fields, lay mines, and enter defended harbors.

1662. **The Leon torpedo.** (Royal Society of Arts, Journal, London, v. 63, 1915, p. 1031-1032.) VA

Invention of Carl Leon, a Swedish officer.

1663. **Lewes, Vivian B.** Modern munitions of war: poison gases and incendiary bombs. (Royal Society of Arts, Journal, London, v. 63, 1915, p. 827-831.) VA

Abstracted in *Engineer*, London, v. 120, 1915, p. 82-83, *I.A.*; *Nature*, London, v. 95, 1915, p. 608-609, *O.A.*; and in *Illustrated London news*, London, v. 147, 1915, p. 140, * *D.A.*

1664. — Modern munitions of war: shells and high explosives. (Royal Society of Arts, Journal, London, v. 63, 1915, p. 823-827.) VA

Abstracted in *Illustrated London news*, London, v. 147, 1915, p. 108, 98, * *D.A.*

Valuable notes on bombs and grenades. The second of the Fothergill lectures for 1915.

1665. **The "Lusitania" torpedoed.** illus. (Literary digest, New York, v. 50, 1915, p. 1133-1134.) * DA

1915, continued.

1666. M., A. W. Mine-sweeping in the North sea. illus. (The Field, London, v. 125, 1915, p. 90.) † **VPA**

Describes methods used.

1667. A Master of the torpedo. illus. (Navy and army, London, new series, v. 3, 1915, p. 367-370.) † **VWZH**

Notes on the work of Sir Arthur Knivet Wilson, popularly known as "Tug Wilson," former commander of H. M. S. *Vernon*, the torpedo school at Portsmouth, Eng.

1668. Metallographische Untersuchung einiger Granatsplitter. illus. (Stahl und Eisen, Düsseldorf, Jahrg. 35, 1915, p. 170-171.) **VIA**

1669. Mills, W. The Mills grenade. illus. (Arms and explosives, London, v. 23, 1915, p. 154.) † **VOG**

1670. The Mine war in the trenches: explosion and crater. illus. (Illustrated London news, London, v. 60, 1915, p. 699.) * **DA**

Another illustration, p. 719.

1671. Modernizing the hand-grenade. illus. (Literary digest, New York, v. 50, 1915, p. 1015-1016.) * **DA**

Compiled from *Technical world magazine*, April, 1915.

1672. Munitions of the present war. (Railway review, Chicago, v. 57, 1915, p. 373-376.) † **TPB**

Poisonous gases and incendiary bombs, p. 375-376.

1673. Newton, W. Douglas. The bomber, a psychological study. (Illustrated London news, London, v. 147, 1915, p. 632.) * **DA**

View of Germans throwing hand grenades from trenches.

1674. Oelker. Tabellarische Zusammenstellung in- und ausländischer Patente, betreffend Hand- und Gewehrgranaten und dgl. (Zeitschrift für das gesamte Schiess- und Sprengstoffwesen, München, Jahrg. 10, 1915, p. 87-89, 99-100, 112-113.) **VOA**

1675. Pollen, A. H. The "L. S. D." of the submarine blockade. illus. (Illustrated London news, London, v. 146, 1915, p. 374.) * **DA**

Illustration and description of the "Daylight torpedo-boat," a small automatic submarine torpedo.

1676. Polster. Hand- und Gewehrgranaten. illus. (Verein deutscher Ingenieure, Zeitschrift, Berlin, Bd. 59, 1915, p. 447-448.) **VDA**

1677. — Minen- und Bombenwerfer Frankreichs. illus. (Kriegstechnische Zeitschrift, Berlin, Jahrg. 18, 1915, p. 153-157.) **VWA**

1678. Precautions against incendiary bombs. illus. (Oil and colour trades journal, London, v. 47, 1915, p. 1948.) **VOP**

1679. Protection of battleships from submarine attack. illus. (Illustrated London news, London, v. 146, 1915, p. 34, 53.) * **DA**

1680. The Recrudescence of siege warfare. (Illustrated London news, London, v. 146, 1915, p. 204.) * **DA**

Descriptions of various types of the German Minnenwerfer.

1681. The Revival of the hand-grenade in trench warfare: types and methods, French, British, and German. illus. (Illustrated London news, London, v. 146, 1915, p. 790-791.) * **DA**

1682. Savorgnan di Brazzà, Francesco. Attacchi e battaglie aeree. (In his: La guerra nel cielo. Milano, 1915. 4°. p. 198-226.) **VDY**

1683. Sinker of the "Bouvet," "Irresistible" and "Ocean." illus. (Illustrated London news, London, v. 146, 1915, p. 461.) * **DA**

Illustrations and description of the Leon torpedo-mine, invented by Capt. Karl Oskar Leon.

1684. Sinking of the "Lusitania." illus. (Illustrated London news, London, v. 146, 1915, p. 630-636.) * **DA**

Valuable series of photographs and sketches.

1685. Sunk by an enemy's torpedo: a steamer going down. illus. (Illustrated London news, London, v. 147, 1915, p. 260-261.) * **DA**

Account of the sinking of the *Carthage* and *Arabic*.

1686. Thomas, Tom R. Gyroscopic applications, with demonstrations. (Liverpool Engineering Society, Transactions, Liverpool, v. 36, 1915, p. 99-118.) **VDA**

Discussion, p. 120-124.

The steering of torpedoes, p. 110-112.

1687. Throwing grenade bouquets to the enemy. (Literary digest, New York, v. 50, 1915, p. 1026-1028.) * **DA**

1688. Torpedoes and torpedo craft, the development of a formidable naval arm. illus. (Navy and army, London, new series, v. 3, 1915, p. 100-102.) † **VWZH**

1689. "The Unworthy method of making war"; German poison gas. illus. (Illustrated London news, London, v. 147, 1915, p. 77.) * **DA**

1690. "Weeping" gas; poison gas and other enemy devices; trench warfare trophies. illus. (Illustrated London news, London, v. 147, 1915, p. 660-661.) * **DA**

Interesting series of illustrations.

1691. What to do in the case of further air or sea raids. illus. (Sphere, London, v. 60, 1915, p. 162.) * **DA**

1692. Zeppelin visit to London. illus. (Sphere, London, v. 61, 1915, p. 228-229, 232.) * **DA**

1916

1693. Aerial torpedo is built by western inventor. illus. (Popular mechanics magazine, New York, v. 26, 1916, p. 207.) **VFA**

1694. Aerial torpedo of great power. illus. (Popular mechanics magazine, New York, v. 25, 1916, p. 25.) **VFA**

Wirelessly controlled.

1695. Automobile torpedo control. (Army and navy register, Washington, v. 60, 1916, p. 9, 73.) **† VWA**

Invention of John Hays Hammond, jr. Brief note on proposed congressional legislation. For an account of test see p. 316.

1696. Buttner, Alexander. Throwing bombs from airships. How to aim the projectile to hit a given object. illus. (Scientific American supplement, New York, v. 81, 1916, p. 85.) **VA**

Translated from *Die Umschau*. With a historical note on the attempt at the siege of Venice in 1849 to drop bombs from an unguided balloon.

1697. Dodge, William W. Liquid fire and asphyxiating gases. (Army and navy register, Washington, v. 60, 1916, p. 8.) **† VWA**

Gives history of the use of Greek fire.

1698. Dropping aerial bombs thru a cone of light. (Electrical experimenter, New York, v. 4, 1916, p. 86.) **VGA**

1699. Du Verseau, pseud. Un sous-marin allemand poseur de mines pêché par les Anglais. illus. (La nature, Paris, année 44, semestre 2, 1916, p. 169-172.) **OA**

1700. Eliphalet Bliss. (National cyclopaedia of American biography, New York, v. 15, 1916, p. 20.) *** R-AGZ**

Manufacturer of the Bliss-Leavitt torpedo.

1701. Fauntleroy, A. M. Grenades. (United States naval medical bulletin, Washington, v. 10, 1916, p. 46-48.) **WSR**

1702. Fighting with liquid fire. (Literary digest, New York, v. 52, 1916, p. 924-925.) *** DA**

Gives description of the effect of the "Flammenwerfer." Refers to the story by H. G. Wells giving "nightmarish" story of the Martians attacking England, which has become a fact.

1703. The Finned bomb of trench warfare: makers of air-torpedoes. illus. (Illustrated London news, London, v. 148, 1916, p. 404-406.) *** DA**

1704. Firing a torpedo from the deck of an American destroyer and loading a torpedo on the submarine "G-2." illus. (Popular mechanics magazine, New York, v. 25, 1916, p. 90-91.) **VFA**

Interesting illustrations.

1705. Frank McDowell. (National cyclopaedia of American biography, New York, v. 15, 1916, p. 20-21.) *** R-AGZ**

Notes on the Bliss-Leavitt torpedo.

1706. The Greek fire of the Germans. (Illustrated London news, London, v. 149, 1916, p. 168.) *** DA**

Notes on history.

1707. Grenades, rifle and hand. illus. (Scientific American supplement, New York, v. 81, 1916, p. 84.) **VA**

Illustrations of various grenades used at the front.

1708. Guns and flame projectors: battle spoil on the Somme front. illus. (Illustrated London news, London, v. 149, 1916, p. 795.) *** DA**

Description of a German Flammenwerfer.

1709. Hill, Allan. Molding hand grenades. illus. (Brass world, New York, v. 12, 1916, p. 167-168.) **VIA**

From *Foundry trade journal*, England.

1710. Hopkins, Albert Allis, compiler and editor. The Scientific American war book; the mechanism and technique of warfare, compiled and edited by Albert A. Hopkins ... Articles by Rear-Admiral Mahan, Major A. G. Piorkowski, Lieut.-Col. L. S. Roudiez ... Fred C. Hild, the aviator, Major H. Bannerman-Phillips, Captain W. D. A. Anderson ... and many others. New York: Munn & Co., Inc., 1916. 3 p.l., 338 p., 1 pl. illus. 8°. **BTZE**

Trench warfare, p. 107-116; Grenades in modern warfare, p. 156-164; The modern automobile torpedo, p. 283-286; Attack and defense by submarine mines, p. 287-291; Aerial torpedoes and torpedo mines, p. 298-301.

1711. Illustrations of German trench guns. illus. (Illustrated London news, London, v. 148, 1916, p. 96.) *** DA**

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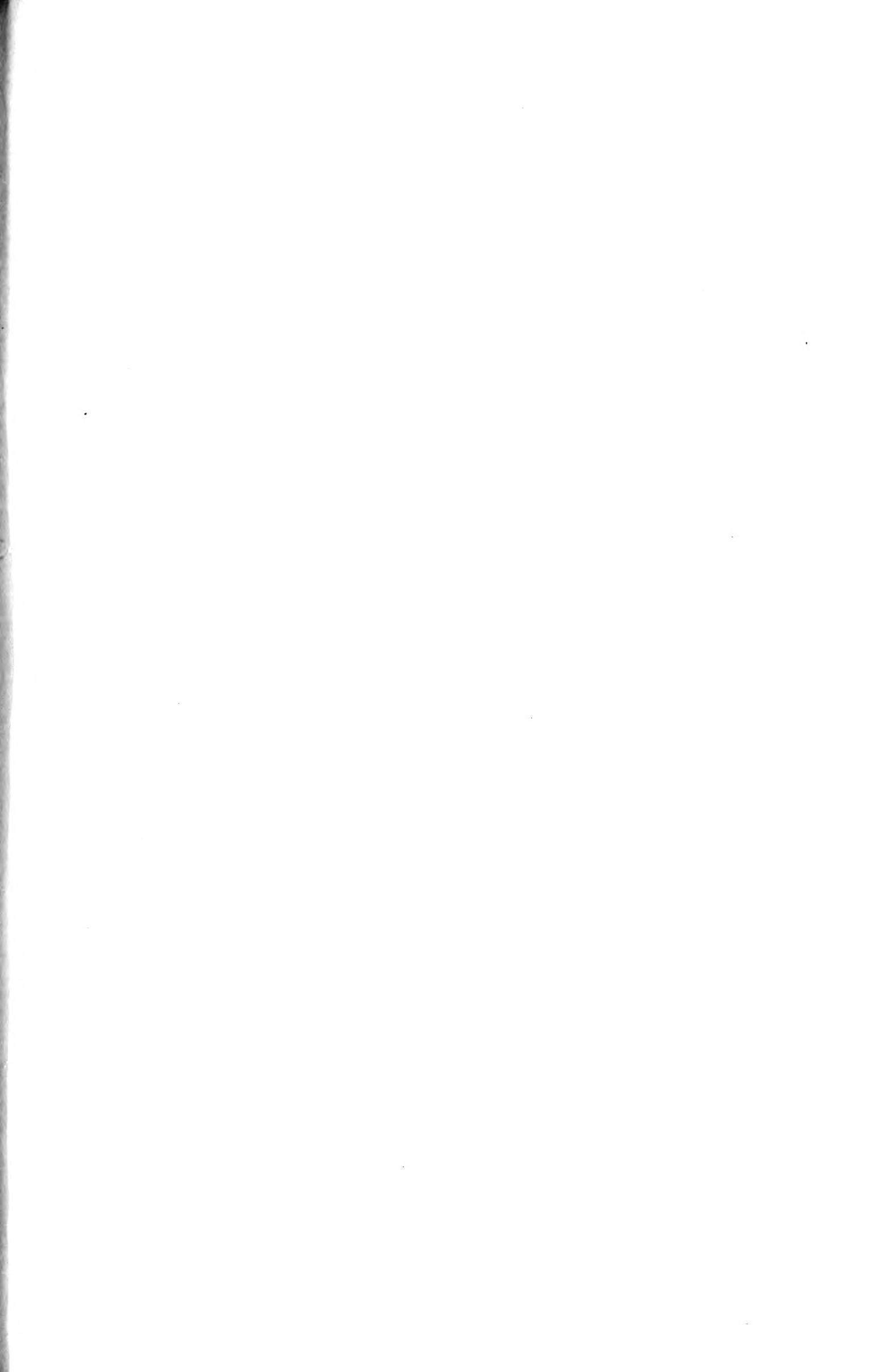
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